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GUARDIAN XP

GXP Series Operating Manual

Part #8M00550 Rev. 14

Standard Change-Makers, Inc.
Indianapolis, Indiana

One Year
Limited Product Warranty

Standard Change-Makers, Inc. ("Manufacturer") warrants the machine (the "Product"), excluding any component(s) not manufactured by Standard Change-Makers, Inc. (Third Party Product(s)), to be free from defects in material and workmanship if properly installed according to the Manufacturer's Installation Instructions and serviced and operated under normal conditions according to the Manufacturer's instructions. **THE MANUFACTURER MAKES NO EXPRESS WARRANTIES WITH RESPECT TO, AND DISCLAIMS ANY IMPLIED WARRANTIES APPLICABLE TO, ANY THIRD PARTY PRODUCT(S) INCORPORATED INTO THE PRODUCT INCLUDING WARRANTIES AGAINST INFRINGEMENT, WARRANTIES OF MERCHANTABILITY AND WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE.** However, the manufacturer of Third Party Product(s) may have a warranty that is applicable to the owner of the product. Please contact the Manufacturer for additional warranty information regarding any Third Party Product(s).

No other promise or affirmation of fact concerning the Product and no other description, sample or model of the Product shall be construed as augmenting or supplementing this limited warranty, unless the additional warranty is in writing and signed by an authorized representative of Manufacturer. The warranty period commences on the date the Product is put into service ("Installation Date").

During the twelve months after the Installation Date, Manufacturer shall repair or replace (without charge to the owner) the Product, or any component or part thereof (except Third Party Product(s)), which is determined, in the sole discretion of Manufacturer, to have defects in materials or workmanship prior to the Installation Date.

MANUFACTURER SHALL ONLY BE OBLIGATED TO PERFORM WARRANTY WORK IF THE PRODUCT, OR ANY COMPONENT OR PART THEREOF, IS RETURNED TO MANUFACTURERS FACTORY, OR ONE OF ITS COMPANY-OWNED SERVICE CENTERS. TRANSPORTATION CHARGES SHALL BE PREPAID BY THE OWNER.

Each Product shipped from the factory contains Owner's Manuals. Before shipping a Product to Manufacturer or one of its company-owned service centers for warranty work, the owner shall be certain that the source of difficulty could not be corrected by performing one or more of the procedures described in the Owner's Manuals. If Manufacturer finds, in its sole discretion, that the difficulty could have been corrected by following a procedure in an Owner's Manual, **MANUFACTURER RESERVES THE RIGHT TO MAKE THEIR REGULAR CHARGE FOR ANY WORK PERFORMED.**

This limited warranty shall not apply to any Product which must be repaired or replaced because of normal wear, which has been subject to misuse, negligence, or accident, or which has been repaired or altered outside of Manufacturers factory, or one of its company-owned service centers, unless authorized by Manufacturer. Manufacturer shall not be liable for any loss, damage, or expense (including, without limitation, the loss of money caused by inadvertent machine dispense or by the use of counterfeit or bogus money) caused from or related in any way to the use of the Product or from any other cause.

No person, agent, dealer, or any other entity is authorized to give or alter any warranties on behalf of Manufacturer nor to assume for Manufacturer any other obligation or liability in connection with the Product. Manufacturer reserves the right to make design and/or operational changes to the Product without obligation to incorporate these changes in to the Product covered by this warranty.

THIS LIMITED WARRANTY IS VALID ONLY IF AN OWNER'S WARRANTY REGISTRATION CARD HAS BEEN FULLY AND PROPERLY COMPLETED AND IS ON FILE WITH THE MANUFACTURER. THIS LIMITED WARRANTY SUPERSEDES AND IS GIVEN IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES APPLICABLE TO THE PRODUCT, THE BILL ACCEPTOR OR BILL DISPENSER (WHETHER ARISING UNDER STATUTE, COMMON LAW, CONVENTION OR TREATY), INCLUDING WARRANTIES AGAINST INFRINGEMENT, WARRANTIES OF MERCHANTABILITY AND WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. MANUFACTURER'S OBLIGATION TO REPAIR OR REPLACE ANY PRODUCT, OR ANY COMPONENT OR PART THEREOF, AS SET FORTH ABOVE SHALL BE IN LIEU OF ALL OTHER REMEDIES. IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Effective July 1, 2008

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1.0 QUICK START GUIDE

Your machine has been shipped preprogrammed from the factory. All settings will be programmed to the factory default unless otherwise specified at the time of order. The majority of new machine

owners need only read this section in order to learn the basic installation and operating features of your machine.

> **!!!! CAUTION !!!!**
> Always disconnect the 24V power supply(s) before adding or removing a module.
> Failure to do so can result in corrupt data and premature component failure.

1.1 Loading The Coin Dispenser

Loading the coin dispenser is a simple task. For coins contained in a bank bag, grasp the neck of the bank bag and twist it to choke the mouth of the bag. Invert the bag and insert the neck of the bag into the top of the coin dispenser. Loosen your grip on the bag neck slowly, letting coins feed down into the dispenser. The table below shows a convenient filling level for the various standard coin dispensers. When possible, you can turn your bank bags inside out and lessen the chance of small strings and threads from accumulating in your coin dispenser. Clean coffee cans or plastic pails can also be used to fill the coin dispensers.

Type	No. of Coins	Value
Quarter Dispenser	2,000	$500
Dollar Dispenser	1,500	$1,500

Modular Coin Dispenser

Quick view of Coins remaining

Status LED (Yel - Top)

Power LED (Grn - Middle)

Coin Out LED (Red - Bottom)

Push Button (Reset)
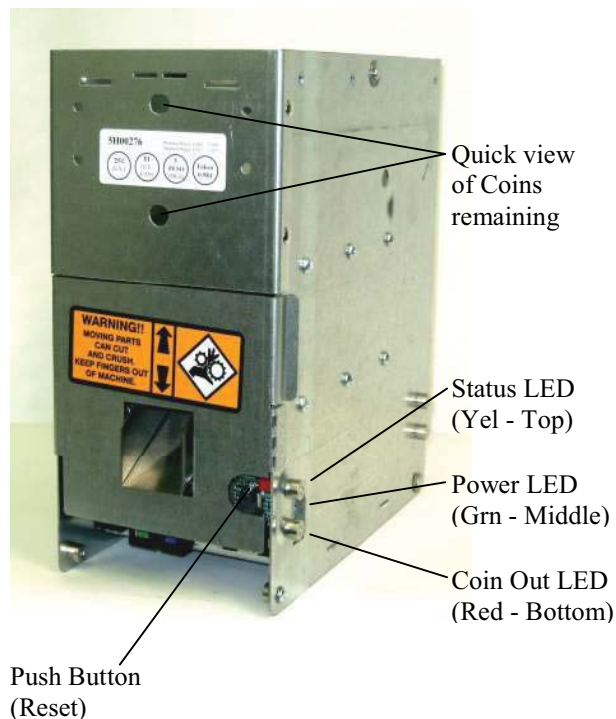
1.2 Removing Bills From The Bill Acceptor Bill Box

The bill box is attached to the rear of the bill acceptor. Each bill box will have an access door that can be easily opened to allow the accepted bills to be removed. The location of the access door varies depending on the bill acceptor model, yet all are easily viewable. See the pictures below for the common access door locations.

Mars Acceptor   Coinco Acceptor

1.3 Emptying The Coin Dispenser

The majority of coins in a dispenser can be removed from the hopper using the *bulk dump* method. Bulk dumping refers to the manual method of emptying coins from a dispenser into a container. A few coins will remain in the dispense disk following a *bulk dump;* these coins can be removed by performing an *electronic dump*.

CAUTION

As a safety precaution you should never place your fingers in or near the coin dispense chute or in the coin storage area of the coin dispenser when power is applied to the dispenser.

Bulk Dump Method

Bulk dumping is performed the same way for all standard capacity (3200 quarters) coin dispensers. Do not use the bulk dump method to empty a high capacity hopper unless it has only 30% or less of the coins remaining. Coin dispensers in front load machines tilt forward, and dispensers in rear load machines tilt back. Always TURN POWER OFF before bulk dumping a hopper for safety purposes. To tilt the coin dispenser pull forward at the top edge of the dispenser.

Coin Dispenser – Bulk Dump

Dump Position
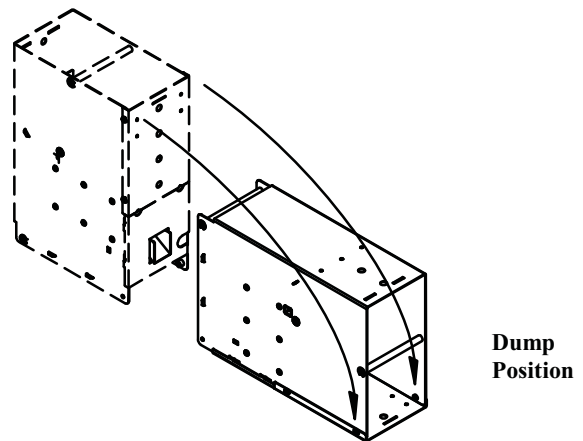
Electronic Dump - The coin dispenser must first be in a "Sold Out" condition and not in error. This condition occurs when the remaining coins are insufficient to complete a vend for a large denomination bill. The diagnostic LED will be blinking at a slow steady pace indicating a Sold Out condition. To begin, turn the machine power off, then back on. Wait for the machines Out Of Service lamp to change from the constant ON state to a BLINKING or OFF state. Make sure that the dispenser is flashing a dispenser sold out code. If any other flash code is shown when pressing the *Push Button* it will reset the dispenser. You will have to power cycle the dispenser again. Next, press and release the *Push Button* (see diagram above for location). The dispenser will begin dispensing within 5 seconds. The coin dispenser will stop when all coins have been cleared. Note: The *push button* must be pressed within 5 minutes of the time the power was turned off / on to the machine.

1.4 Loading Paper In The Printer

<u>Automatic Loading With Power On</u> – Pull the black plunger out and load paper in. When the printer senses the paper it will pull the paper in. See photos below.

<u>Manual Loading With Power Off</u> – Pull the black plunger out and load paper in. At the same time rotate the large blue knob counterclockwise to pull the paper in. See photos below.
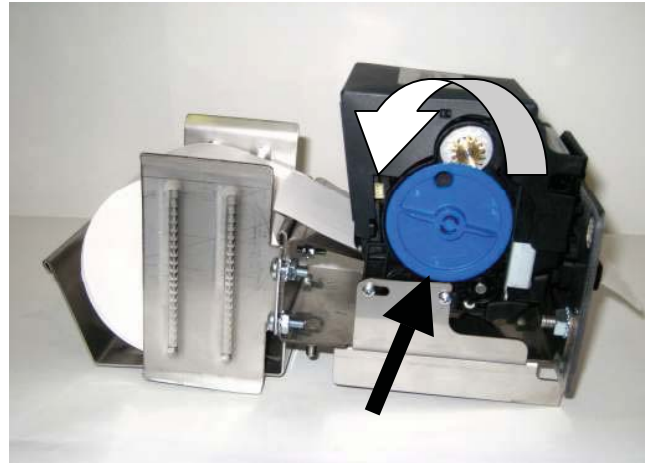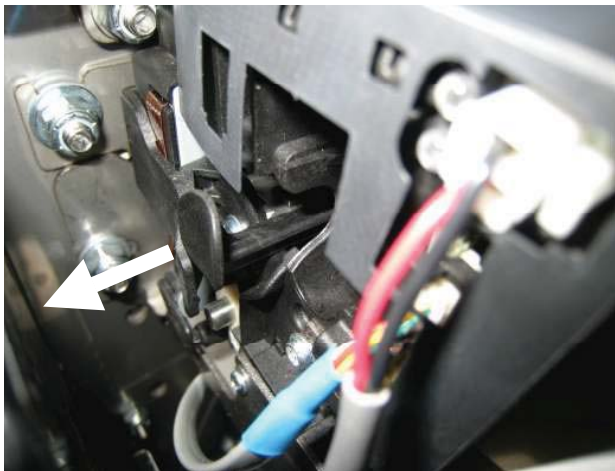
Note – Push plunger in to remove paper.

1.5   Crank Lock Operation

The crank lock is quick and easy access to the interior of the cabinet with maximum security. To remove the plug locks it is only necessary to insert key and rotate ¼ turn. Next turn the wrench handle counter clockwise until it disengages from the interior lock mechanism and then pull the door open.   To lock the door, close door and turn the crank lock handle clockwise until door is closed tight.   The crank lock handle can then be removed from door and replaced with plug locks. See photos below of lock bolt wrench and plug locks.

Lock Wrench in Unlock Direction

Key in Unlock Direction

SUGGESTION: Place the extra key and key number tag to the cabinet in a safe place in the event it is needed at a later date.

2.0 GETTING THE MOST FROM YOUR PURCHASE

2.1   Quick Access to Reports

Quickly obtaining reports from your machine – if your machine is equipped with a printer, you can quickly obtain the reports needed know exactly what your machine has been doing. You can even obtain a group (Quick Print Group) of reports from the machine without opening the door (External Access) to the machine. To learn more about this feature refer to the section's of this manual titled "External Access Settings Menu" and Quick Print Reports".

2.2   Remote Alarm Notification

The machine is equipped with the ability to send 8 alarm signals to an alarm dialer. A majority of the 3rd party alarm dialers available can be connected to the machine to provide quick notification of the alarm conditions. An alarm dialer with the features ideally suited for the machine can also be purchased from the distributor that sold you the machine. To learn more about the alarm conditions available from the machine see the section titled Alarm Settings.

2.3   Printer Option

A printer option has many benefits. You can use it to print reports, advertise specials, provide receipts needed by fleet customers and business customers who submit these for reimbursement, and you can use it to provide receipts for charity donations. See the section of this manual.

3.0 PROGRAMMING, REPORTS & ERRORS

Overview of Owner Interface

The *Owner Interface* features allow you to navigate through the various programming and reporting menus and reset the machine from error conditions. The User Keypad, User Selection Buttons and User Display located on the front of the machine will be used to navigate through the various Main Menu features available.

Overview of Settings & Report Menu Items

There are a variety of menus items available. Each main menu item will be either a Setting or a Report item. *Settings* are nothing more than system parameters that can be used to establish the machine behavior. Settings will typically relate to the hardware modules that you have purchased. For example, the "Bills Accepted Settings" menu relates to the bill acceptor and can be used to set the bill denominations to be accepted. As a result you can change the acceptance and security behaviors of the machine.

Reports allow you to view records that are stored in the machine. These records are useful for accounting and troubleshooting. See the section titled "Report Menus" and "Settings Menus" for an explanation of the benefits of each. Each setting type or report type can be viewed (on user display) or printed (on receipt printer).

Overview Of Error Messages

If an error was detected in the machine the error condition will be the first thing displayed as you enter the Main Menu. If multiple errors have occurred you will see the next one each time the Right Arrow button is pressed. Continue pressing the right arrow button until you see the first Setting or Report menu item. Hint – you can also view the machine errors and events by accessing the Event Report menu item. See the section of this manual titled Event Reports for more detail. For information regarding the errors, see the section of this manual titled Troubleshooting.

3.1   Accessing the Main Menu

Always start at the "MAIN MENU" screen. Note – you can return to the Main Menu screen at any time by pressing the EXIT button one or more times. Once in the Main Menu you will either see the first *main menu* item or you will see one or more errors that were issued by the machine. If you see errors you will need to clear them. See the Troubleshooting section of this manual before proceeding.

*F*ind the desired Setting or Report by pressing the RIGHT (forward) arrow button. To view the previous main menu, item simply press the LEFT (back) arrow. Once you have found the desired setting or report, you can then go *down* into the *Details List* for this item to view additional details related to it. Note – the main menu headings are in CAPS (all capitalized letters).

Enter the Main Menu by pressing both red buttons simultaneous for at least 3 seconds and then release them. See the decal (below) located on the main control panel for the location of the two red buttons.

Test Button   Reset Button
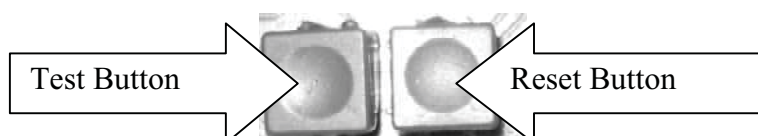
```
┌─────────────────────────────────────────────────────┐
│  1. IF THE STATUS LIGHT IS FLASHING                  │
│  A CODE OR IF YOU WANT TO                            │
│  ACCESS THE PROGRAMMING MENU.         Press         │
│  PRESS BOTH TEST AND RESET TO                       │
│  ENTER MENU.  Note - see viewing errors  Both       │
│  below.                                             │
│  2. PRESS RIGHT ARROW TO VIEW         For           │
│  REPORTS OR SETTINGS.                               │
│  3. PRESS DOWN ARROW TO VIEW          MENU          │
│  DETAILS.                                           │
│                                                     │
│  Viewing Errors - Upon entering the menu            │
│  the current error (if any) will be displayed.      │
│  Dispenser errors will also be displayed as         │
│  flash codes on the dispenser.                      │
│                                                     │
│                                    TEST   RESET     │
│  ◄─── STATUS - YELLOW                                │
│       POWER - GREEN                                  │
│            6D00947                                   │
└─────────────────────────────────────────────────────┘
```

Exit by pressing the Cancel button on the front of the machine.

3.2   Menu Navigation

Navigating the menus in the EF-II controller is much the same as navigating the menus in a cell phone. There are arrow buttons to move you through the different menus, numeric buttons for entering numbers and text, a clear button to clear entries, and a Exit button to move back through the menu selections.

Arrow Buttons
The right / left arrows are used to change from one main menu item or to pick one of the multiple settings. The up / down arrows are used to move through the list of available settings for each main menu item.

EXTERNAL
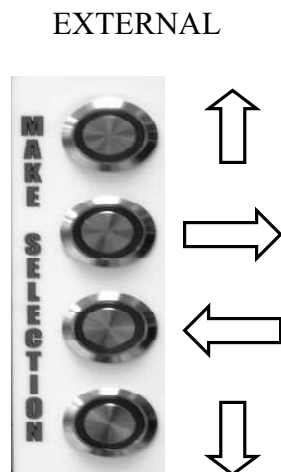
Arrow Buttons

Number & Text Buttons

The Numeral / Alphabetical buttons on the User Keypad are used for numeric and text entries much the same way as you would use your cell phone keypad to create a text message or phone record entry. Symbols ("$-&*<>…) and Spaces are entered using the 0 and 1 buttons. The # symbol is entered using this button. It is important to note that the # button on the User Keypad is not used to enter the # symbol.

EXTERNAL KEYPAD

Alpha-Numeric Buttons

Yes and No Buttons

The Numeral button 6 (MNO) is used for No and the numeral button 9 (WXY) is used for Yes.

"N" for No

"Y" for Yes
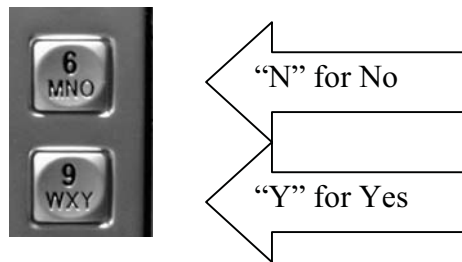
Help Button

The Help button is used to display help relating to the menu feature you are looking at. It will also provide navigation tips to let you know how to move through the menu to see available choices. If at any time you are not sure what to do next just press the Help button.

USER KEYPAD
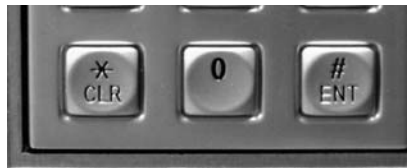
Help Button = # / ENT

Some help screens will not fit on a single display screen so it may be necessary to press the question-mark button (?) a second or third time in order to view the next help screen. The help screens include detailed information that pertains to the feature you are viewing or setting.

Clear Button

The clear button is used to clear numeric entries or report totals.

USER KEYPAD

Clear Button = * / CLR

Exit Button

The Exit button is used to step back through the menus and then to exit the programming mode.

USER CANCEL

Exit Button = Cancel

3.3 Drilling Down into a Menu

The UP and DOWN arrow buttons are used to navigate up and down through the list of details for a given *feature group*. You can move down in the list by pressing the DOWN arrow button. You can move up in the list by pressing the UP arrow button. When the end of the list is reached, the following message is displayed: "end of list". At this point you can press either the EXIT or DOWN arrow button to get back to the top of the list.

3.4 Menu Entries / Questions

Entering information into a menu will be in the form of answering questions. There are four types of questions presented - a Yes or No question, a question that requires a numeric answer, a text enter where are asked to name something, or a multiple choice question where you pick an answer from the available list of answers. Here is how to identify which type of question is being asked and how to answer it:

- Yes or No questions. These can be quickly identified because they end with a question mark "?" symbol. They are answered with a Yes (9 button on the user keypad) or No (6 button on the user keypad). These are typically used to enable or disable certain functions within the machine.
- Numeric Entries. These can be quickly identified because they always have a number in the entry even if the number is zero. These are answered by entering in a number from the user keypad. Pressing the clear button will zero the entry. These are typically used to set vend amounts, time delays, alarm inputs, etc.
- Text Entries. These can be quickly identified because a cursor (underline or under score symbol) will be blinking under the first letter of the entry. These are answered using the letters associated with each number on the user keypad, much like you enter new information into a cell phone address book. These are typically used to allow you to create a receipt header or footer, to enter a wash name, to enter a promotion name, etc.
- Multiple Choice Entries. This type of question can be identified by the current selection having arrows on each side of the ←answer→. To see the list of available choices press the left or right arrow button and the next choice is shown. Once you have found your answer just press the down button to proceed to the next question and the choice you were viewing will be accepted as the answer.

4.0 PROGRAMMING THE COIN DISPENSER

For any reason it becomes necessary to change the coin to be dispensed, you must first contact a factory authorized service center to determine if the hopper can dispense the new coin size (dia. & thickness).   If it can, then you need only to change the dip switch setting on the hopper dispenser board to program the hopper for the new coin value. Once this setting has been made, press the reset button to enter in that value. The dip switch located on the hopper control board is used to identify the value of coin the hopper is to dispense. The table below shows the setting for each coin value. Also, note that the token setting is also included in the table.

If you have changed the hopper value, you will need to reprogram your Wash Settings from the main menu of the Guardian XP Control Module. This is necessary so that the Guardian XP will return the correct change for any refund due.
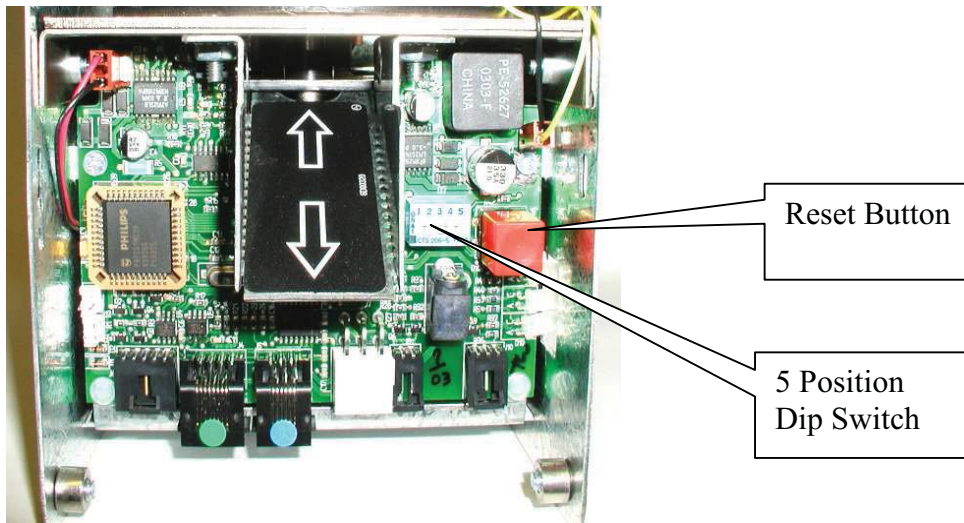
DISPENSER VALUE SETTINGS

Value	SW1	SW2	SW3	SW4	SW5
Token	*DOWN*	DOWN	DOWN	DOWN	DOWN
$.05	*DOWN*	DOWN	DOWN	DOWN	UP
$.10	*DOWN*	DOWN	DOWN	UP	DOWN
$.20	*DOWN*	DOWN	DOWN	UP	UP
$.25	*DOWN*	DOWN	UP	DOWN	DOWN
$.50	*DOWN*	DOWN	UP	DOWN	UP
$1.00	*DOWN*	DOWN	UP	UP	DOWN
$2.00	*DOWN*	DOWN	UP	UP	UP
$5.00	*DOWN*	UP	DOWN	DOWN	DOWN
$10.00	*DOWN*	UP	DOWN	DOWN	UP
$20.00	*DOWN*	UP	DOWN	UP	DOWN
$50.00	*DOWN*	UP	DOWN	UP	UP

5.0 REPORT MENUS

5.1   Printing a Report

Reports can be printed by pressing answering yes (button 9 on user keypad) when prompted (asked if you want to print a report). Reports can be cleared by answering "yes" when prompted or by pressing the "clear" button while at the main menu for the desired report. Example: if you want to clear the Audit Report then press the "clear" button while the "Audit Report" main menu item is showing on the display.

5.2   Quick Print Reports

The Quick Print feature allows you to set a group of reports that can be quickly printed as a group. This saves you valuable time in obtaining reports. To create a quick print group simply go to the Quick Print main menu and answer yes to the reports you want included. To initiate the printing of the reports in this group you can either press the (0) button after you have entered the Main Menu or you can print it from outside the machine if you have created an External Access code. For more information on External Access codes see this menu item explanation.

5.3   External Access Settings Menu

This feature allows you to perform various functions without opening the machine door. For example, you can print the Quick Print Reports by entering an *access code* on the User Keypad. You must press the Enter key (# /ENT) button after entering the code. This code can be any length from 1 to 6 digits. It is always advisable to use at least a 4 digit code to achieve a reasonable level of security. Additional code lengths will add additional security.

Silencing the voice module while entering your access code: If your machine is equipped with a voice module you will likely want to "silence" the voice so it does not repeat the access numbers you are entering. This is particularly helpful when there are other people at the site and they are close enough to hear the voice module. To silence the voice for a short period of time press the clear (CLR) button on the keypad 5 times in rapid succession. To permanently silence voices for all numeric entries set "Disable keypad voices?" to YES in Other Settings.

5.4   Configuration Report

This feature is used for troubleshooting only. It allows you to view the software version for the program in each of the machine modules: dispensers, EF Module, etc. The type and value of each dispenser can also be found here. Other devices connected to the GXP will be displayed here also.

5.5   Prompt Setting and Report Menu

See "Prompt Settings" section of this manual for more information.

5.6 Audit Reports Menu

There are two audit report types available. The most commonly used audit is the "resettable audit". This audit can be cleared and will provide accounting for any machine activity form that point until it is cleared again. The second audit report type is the "perpetual audit". This audit cannot be cleared and represents all activity form the time the machine was manufactured. This audit is useful when verification of the machine accounting cannot be ensured using the resettable audit. Each of these reports are available in detail or summary.

Note - It is not unusual for the Revenue In to exceed the Revenue Out in a machine that is set to allow "Exact Change Only" operation in the event a hopper is not available for making change.

5.7 Event Report

The event report provides valuable troubleshooting information. Each major machine event is logged in this report and can be used to isolate any problem sources. Examples of events that are logged are power losses, machine resets, and machine errors. This report like other reports is viewable or can be printed.

5.8 Promotion Reports

If you have setup a promotion this report will show you what you have setup. For information related to using the Promotion Features in this machine, see the section titled " Setting Up a Promotion".

5.9 Printer Reports

This is a menu for reports that do not belong to another menu. These are explained below. Many of the reports available in other menus can also be printed here for conveyance.

5.9.1 Summary Resetable and Perpetual Audit

This reports the overall revenue in, wash sales and revenue out. These are the same reports as in the Audit Reports Menu.

5.9.2 Door Open History

If a door switch kit (4K00439) is installed the machine can capture the Resetable Audit, Perpetual Audit, Event Report, Configuration Report and Accept Report for the last six times that the door was opened. From this menu you can print all six of the captured reports.

5.9.3 Shift Audit

There are two shift audits that are independent of each other. They can be printed and cleared separately from each other.

The following example report is an Accounting Report that can be printed at the GXP machine. The GXP machine will require a Portable Audit printer or the Receipt printer so it can provide the printed report. This report identifies:
1) The total *wash code* sales activity from the POS (Code Command) terminal.
2) The total *wash code* sales activity from the Pumps (Fuel Dispensers).
3) The total *cash or credit* sales activity from the GXP machine.

4) The total number of all *washes* that were issued from the GXP to the wash bay.
5) The total number of *wash codes* that were redeemed at the GXP machine.

Note: If you do not have a POS connected to the GXP machine only the GXP Sales will be printed.

```
/------------------------------\
| SHIFT AUDIT 1              |
| location id 0             |
| 01/18/10 MON 1:07 PM |
\------------------------------/

last cleared on
 01/15/10 FRI 8:43 AM

POS Terminal Sales

 WASH 1
  Full Price qty=8
  Discount 1 qty=0
  Discount 2 qty=0
  Rewash qty=0

 WASH 2
  Full Price qty=10
  Discount 1 qty=0
  Discount 2 qty=0
  Rewash qty=0

 WASH 3
  Full Price qty=12
  Discount 1 qty=1
  Discount 2 qty=0
  Rewash qty=1

 WASH 4
  Full Price qty=6
  Discount 1 qty=0
  Discount 2 qty=0
  Rewash qty=0

 Transactions
  Total qty=38
  Value=$93.00

 Refund
  Total qty=0
  Value=$0.00
```

```
Pump Sales

 WASH 1
  Full Price qty=0
  Discount 1 qty=0
  Discount 2 qty=0

 WASH 2
  Full Price qty=0
  Discount 1 qty=0
  Discount 2 qty=0

 WASH 3
  Full Price qty=0
  Discount 1 qty=0
  Discount 2 qty=0

 WASH 4
  Full Price qty=0
  Discount 1 qty=0
  Discount 2 qty=0

 Transactions
  Total qty=0
  Value=$0.00

 Refund
  Total qty=0
  Value=$0.00
```

```
GXP Sales

 WASH 1
  Cash=$0.00
  Card=$0.00
  Wash Codes=0
  Total qty=0

 WASH 2
  Cash=$0.00
  Card=$0.00
  Wash codes=0
  Total qty=0

 WASH 3
  Cash=$0.00
  Card=$0.00
  Wash codes=0
  Total qty=0

 WASH 4
  Cash=$0.00
  Card=$0.00
  Wash codes=0
  Total qty=0

 total
  Cash=$0.00
  Card=$0.00
  Wash codes=0
  Total qty=0
-------------------------
/------------------------------\
|    END OF REPORT    |
\------------------------------/
```

6.0 SETTINGS MENUS

Update a Setting

The Settings menus are used to "set" values and other operating parameters that are specific to your machine. You can also print a report for almost every setting menu and it is advisable to do so. This will be useful if you need to reprogram for any reason. To enter a new setting first find the main menu topic related to it and then press the down arrow button until you find the setting you wish to change. The setting will be in the form of a Yes or No question, a numerical entry or a multiple-choice list. Once you have made the change you can continue to press the down button to change another related setting in that menu or just press the Exit button to go back to the top of the current Menu.

6.1   Printer Settings

This menu is used to set the printer model included in the machine, identify when you want a receipts to be available to the user, add header or footer information to the receipt, and setup a group of reports to include in the Quick Print report.

Notes on formatting transaction receipts – You can customize the header and footer on your receipt. The header area is typically used to identify your business location. The footer is typically used for printing a "Thank You" to the patron. The footer will be printed with white text on a black background. See the directions at the beginning of this document for a reminder regarding the process for "Entering Text".

6.2   Bills Accepted Settings

This menu lets you set parameters that are associated with the bill acceptor. Use this to increase or lower bill acceptance security, disable or enable acceptance of certain bill denominations, etc.

6.3   Wash Settings

This menu lets you set parameters that are associated with the Wash Packages and *Upsells* that you offer. *Upsells* are upgrades that either come with the wash package or the user can add to their wash package. Use this menu to set the name of the button and whether the button is a wash or an *Upsell*. After all of the buttons have names and they are either a wash or an *Upsell*, values can be assigned to the buttons and you can program the machine to automatically include *Upsells* with a wash package.

When the *Upsell* feature is used, we highly recommend that the machine be configured to operate in the Preselect mode. This reduces the chance for a user to forget to include the *Upsell* item in their purchase. Example - in Preselect mode our display prompts you to "make a selection" before depositing payment. This reduces the chance of someone first depositing payment, then pressing the wash package selection they want, and then trying to press the *Upsell* they want. If payment is deposited first, the sales cycle of the GXP will complete the moment they select their Wash Package; they never get a chance to press the *Upsell* button because the machine had no way of knowing that they "intended" to also purchase the *Upsell*. In Preselect mode we are prompting them to make the select (and *Upsell*) before they deposit payment so they have plenty of time press the *Upsell* button.

Note: At least one of the buttons must be configured (programmed) as a regular Wash Package selection.

6.3.1   Setting the name of the wash package or upsell

button name
The button name is a label that the user will see and it is used in menus and in reports.

The top line of the display is generic and can not be changed. The name you see on the bottom line of the display is the current choice. Use the right or left arrow button to see each of the name options. Hint – this is a multiple-choice entry. If you do not want to use any of the preprogrammed names available then select the *Use Custom* entry. What ever you choose will be used in other menus, in reports and displayed to the user.

Custom Name, The cursor will be flashing under the first character of the *button name*. You can now change the *button name* using the text entry method. Hint – same as a cell phone text entry.

6.3.2   Creating an Upsell

is "button name"
an Upsell? NO

Upsells are packages that either come with the wash package or the user can add to their wash package. *Upsells* if not included with a wash package WILL be selectable. You can not exclude an *Upsell* from a Wash Package, but you can automatically include an *Upsell* with a Wash Package.

YES - If you want this button to be used for an *Upsell*. Later you can associate this *Upsell* with one or more Wash Packages.
NO - The button will be used for selecting a Wash Package.

6.3.3   Entering the value of the Wash Package or Upsell

"button name"
value=$0.00

Enter the value of the button. This could be the wash package value or the *Upsell* value.

6.3.4   Adding an Upsell to a wash package

includes upsell
"button name"?

This is only asked of a wash if you have assigned button(s) as an *Upsell*. This allows you to always include the *Upsell* with a wash package. More than one *Upsell* can be included with a wash package.

YES – The *Upsell* is automatically included with the wash package.
NO – The user will have to select the *Upsell* to include it with the wash package.

6.3.5   Setting the Forced Change amounts

update forced
change settings?

Used to force particular change only when change is needed. This would help promote tips for employees.

YES - To makes changes to the forced change settings.
NO – To go to vend duration.

6.3.5.1   Forcing particular change

cancel uses
forced change? YES

YES – Pressing the cancel button will pay change according to the forced amounts.
NO – The cancel button will not pay forced change.
Note: this is affected by the "cash cancel limit" in Other Settings.

6.3.5.2   Forcing change from cash dispensers

"cash dispenser"
forced change=0

For each money dispenser enter the number of items you wish to force out. The GXP will dispense as many of those items with out exceeding the amount you entered and the amount of change to be given. After Forced Change is finished Make Best Change will apply.

6.3.6   Wash equipment signal time

vend duration
time 1 secs

The length, in seconds, that the wash signal will be active to the car wash equipment.

6.3.7   Upsell signal duration

upsell duration
←wash cycle→

- **Wash Cycle** – The *Upsell* signal will be on until the end of the wash signal is received
- **Timed** – Selecting this will allow an entry in seconds for the length of all *Upsell* signals.

6.3.8   Entry message timeout

entry message
timeout 10 secs

The time in seconds that a driver will be prompted to pull forward.

6.3.9   Entry Delay

entry delay
time 1 secs

This feature is used to increase the amount of time the "Exit Prompt" will be displayed. It is particularly useful in the following circumstances:

- If the Wash Bays has a *purging cycle* that occurs after the washed car has exited the bay. In this example there may be a long delay before the next car (stacked car) is supposed to enter the bay.

Note – if the machine is equipped with a proximity sensor the Exit Prompt will shutoff as soon as the stacked car is no longer in front of the machine, regardless of the Exit Delay time.

6.3.10 Stacking cars

car stacking
←single→

- **Single** – A second user can pay for his wash while a car is in the wash bay.
- **Multiple** – Up to ten users can pay for their wash.
- **None** – A second user can not pay for his wash until the wash bay is empty.

6.3.11 Promoting Wash Upgrades

Allow wash
upgrades? NO

YES - Will prompt waiting users to upgrade to a higher value Wash Package.
NO – This will not prompt waiting users to upgrade to a higher value Wash Package.

6.3.12 Automatically refund upon a wash error

Auto refund on
wash error? NO

YES - Will have the GXP automatically give a refund if a wash bay error occurs.
NO – No refund will be given if a wash bay error occurs.

6.3.13 Monitor the Wash In Use signal?

Enable Wash In Use
signal check? YES

YES - The wash bay will provide a feedback signal to the machine.
NO - There will not be a feedback signal and you want a timed output.

Note: The WASH IN USE/END OF CYCLE signal is typically used in automatic bays. Tunnel bays typically do not use a feedback signal.

6.3.14 Monitor the Wash Bay Fault signal?

Enable Wash Bay
Fault check? YES

YES - The brand of wash bay equipment allows the WASH IN USE/END OF CYCLE feedback signal to issue a pulse indicating the wash bay has encountered an error. When the pulse is detected

the machine will cancel any stacked washes and allow a refund. The Wash Bay Fault signal is not available with all brands of wash bays.

NO – The brand of wash bay equipment does not have a WASH IN USE/END OF CYCLE feedback.

6.4   Gate Settings

This menu lets you set parameters that are associated with controlling an external gate.

6.4.1   Will the machine control a gate?

Will the machine
control a gate? NO

YES - The machine will be controlling a gate.
NO – The machine will not be controlling a gate.

6.4.2   Will a feedback signal from the gate be provided?

Is a gate feedback
signal used? NO

YES - The machine will stack the car until a feedback signal is received.
NO - A timed gate vend signal will be sent and the car will not be stacked.

6.4.3   Gate out signal time

gate vend
time 1 secs

The time, in seconds, that the gate out signal from the PLC will be active. The Gate Out signal goes out at the same time as the wash signal. If the time is set to zero then a Gate In signal will be required at the PLC as feedback to shut off the Gate Out signal.

6.5   POS Settings

If you are connecting the machine to a POS system then select the appropriate brand / model from the available list.

6.6   Card and Bill Fast Vend Settings

The machine is equipped with a feature that can detect unusual and excessive machine activity, usually indicative of fraudulent activity. This feature is called Fast Vend Shut Off. The machine will detect that the frequency of use is unusually high for a pre-determined period of time, and shut itself down for enough time to deter the thief. See the following paragraphs to learn how to set the number of deposits allowed, the time period they are allowed in, and the time the machine will be shut off if this feature is activated.

There are separate settings for bills and cards. To see the Bill Fast Vend Settings you must have a bill acceptor connected. To see the Card Fast Vend Settings you must have a card system selected in Credit Settings.

6.6.1 Bill Fast Vend Settings

This is used to restrict machine usage to normal bill transaction amounts in a given time period. The primary benefit of this feature is in the added protection against stringing should the bill acceptor stringing detection devices become defeated. This feature allows you to set the "normal" amount of bills of each type that are accepted in a given time period. If this usage pattern is exceeded the machine will shut down and stay off-line until the reset button is pressed or until the Error Time Out lapses. See "Other Settings" for a description of this feature and how to set it.

6.6.2 Card Fast Vend Settings

(Applies to version 2.010 or newer)
To effectively manage fraud attempts common to credit card theft, you are provided with four lists. The first list is the _Rejected Card List_. You will enter the frequency of use and time period parameters necessary for the machine to determine when a card has been used an unusual number of times in a given time period. Once a card is used more times than allowed, it will automatically be added to the _Rejected Card List_ along with a time/date stamp of when the card use was attempted. This list can store up to 100 card numbers on a _temporary_ basis. Card numbers present in this list will not be approved until they are removed from the list or the card number is added to the _Good Card List._

The _Good Card List_ is a list of cards that you want to accept regardless of the number of times they are swiped. To add a card to the _Good Card List_ you will manually enter the last four digits of the card number along with the card type.

You can also add known fraudulent card numbers to the _Bad Card List._ This list contains the last four digits of card numbers along with the card type that you want to decline no matter how infrequent they may be used. It is important to note that you should manually transfer card numbers from the _Rejected Card List_ to the _Bad Card List_ as soon as you have confirmed them to be fraudulent cards. Again, the _Rejected Card List_ is temporary. You should manually transfer these card numbers into the _Bad Card List_ if you believe them to be fraudulent. If the _Rejected Card List_ becomes full (first 100 bad cards) the new card numbers will begin to overwrite the older card numbers.

The final list is the _Accepted Card List._ This is a simple list of the cards accepted. You will see the last four digits of the card number along with the card type and a time/date stamp of when the card was used.

You can clear or print any of these card lists. We recommend that you print the list before clearing it so you have a paper record of cards that were once determined to be Good, Bad, Rejected or Accepted.

6.7 Credit Settings

Use this menu to select the card system you want to use. Depending on which card system you have selected you may be asked about IP addresses and ports.

If you have selected the Datacap you should configure the Credit Card reader and modem (black box). It is important to be familiar with your "Merchant Setup" prior to altering any of these settings.

The Merchant Setup information can be found on the forms that were filled out at the time of the machine purchase.

6.8   Alarm Settings

Use this menu to setup the alarm conditions that can be monitored by the Machine. The alarm conditions can be reported to the optional "Alarm Dialer" or to the optional "Auxiliary Alarm Relay". Either of these options can be purchased at the same time as the machine or can be added at a later date. Both are ideal for notifying you when your bay is no longer able to process car washes or the machine has encountered a critical error.

The *Auxiliary Alarm Relay* option can be connected to an existing dialing device that you may already have at your site. You can set any or all of the 8 available alarm conditions to trigger the relay, which in turn will trigger your dialer. This option is most commonly used to notify the owner of only critical alarm conditions that have placed the machine, or wash bay, out of service.

The *Alarm Dialer* option is a dialing system that can report up to eight alarm conditions from the machine. The alarm dialer will call you and identify which of the 8 alarm conditions has been detected thereby allowing you to determine the appropriate response. The list of default alarm conditions available in the GXP machine are shown below. Keep in mind that the Alarm Relay differs in that it can only signal your existing dialer that one or more of the eight alarm conditions has been detected, it cannot be used to identify which of the eight it was.

Below is a list of the alarm conditions that can be monitored by the machine and reported to a dialer. See the Alarm Dialer Installation and Operating instructions for more information related to the dialer.

- Bill Acceptor Offline
- Credit Card Acceptor Offline
- Dispenser Offline
- Cannot Make Exact Change
- Receipt Printer Paper Empty
- Door Opened, Note-This alarm is only available in machines equipped with the optional door switch kit.
- Event Report, Note-something has been added to the Event Report.
- Machine or Wash Bay Out Of Service

6.9   Other Settings

This feature group is where all miscellaneous settings are located. Below is a list of each one.

6.9.1   Owner Language

Owner language
←English→

Used to set the language used when in MAIN MENU/programming mode.

6.9.2 User 1st language

user 1st language
←English→

This is the primary language that will be displayed to the user.

6.9.3 User 2nd language

user 2nd language
←Spanish→

This is the language that will be displayed if the user presses the language button.

6.9.4 Machine Type

Machine Type
←Guardian XP→

This is used to identify if this machine includes any Expanded Function hardware modules. The Guardian XP should be the choice selected under the Machine Type setting.

6.9.5 Error Time Out

Error timeout
15

This feature allows the machine to automatically reset from certain error types. At this time the Error Time Out only applies to Fast Vend Shutoff and a Stringing Detected Error, error conditions. For these errors the machine will be automatically reset following the time period in minutes that you have entered. If zero the machine will not automatically reset from an error.

6.9.6 Hold money that can not be dispensed for the next transaction

Hold escrow?
NO

YES - This will allow the overage to accumulate until there is enough "escrow" to load a wash.
NO - The escrow will be reset to $00.00 after each transaction is completed. You will keep the change that could not be dispensed.

This feature sets the condition of how the machine will operate if an overage in payment can not be returned in the "Exact Change Mode" or if change can not be returned.

6.9.7 Allow exact change

Allow exact
change mode? YES

YES - If you want to keep your machine online even if it can not make change.
NO – If you want the machine offline if you can not make change.

6.9.8   Allow customers to use the machine as a changer

cash cancel
limit = 3

Enter the number of times you will allow a user to insert cash and then press the cancel button to get change. A zero will always allow the user to make change. Version 2.010 or later.

6.9.9   Bill acceptor tamper level

acceptor tamper
←low→

- **low** - Only bill acceptor detection will be used. If the bill acceptor detects a possible stringing attempt it will not issue credit. The System Controller will ignore all MDB codes that may indicate a possible stringing attempt.
- **medium** - The controller will ignore MDB codes that may indicate a possible stringing attempt only when there are no credits. If there are credits or a payout is in progress, the machine will shut down with a bill acceptor error.
- **high** - The controller will go offline if any MDB codes indicate a possible stringing attempt is being made. The machine will shut down with a bill acceptor error. No further transactions will occur until the machine is reset.

This sets the stringing level for all connected bill acceptors. Version 2.010 or later.

6.9.10   Expanded user programming

Expanded prog?
NO

This feature is intended for advance users only and for very unique machine operating requirements. We strongly recommend that this feature is not activated.

6.9.11   Disable card acceptor if cash accepted

Disable card if
cash used? YES

YES - If you want to disable the card reader if cash has been accepted. Money and credit can not be combined in a transaction.
NO - The cash may be dispensed to the customer or retained.

6.9.12   Display items that were dispensed

Display dispensed
Items used? NO

YES - If you want dispensed items to be displayed on the external display after a payout.
NO - If you do not want dispensed items to be displayed on the external display after a payout.

6.9.13   Date

current date

(m/d/y) 01/04/10

If incorrect, enter the current date.

6.9.14 Day of the week

day of the week
←Monday→

If incorrect set the current day.

6.9.15 Time

current time
(h:m) 10:45 AM

If incorrect set the current time. To toggle AM or PM use the numeric keypad while the cursor is under the A or the P.

6.9.16 Sleep Settings

This setting allows you to automatically place the machine in a sleep mode (offline) during periods of the day when you do not want it to be used or when it is not supposed to be used. One start time and sleep duration time setting is available for each day of the week.

6.9.17 PIN numbers

This is used to control access to certain feature groups based on a PIN identification number. This feature is used primarily when non-machine owners will have access to the machine. You can program up to six PINs to allow access to be able to view or view and edit programming features.

6.9.18 External Access Setting

This feature allows the owner to access the Quick Print reports by entering a PIN with the user keypad on the front of the machine. For more information, please refer to the section titled "External Access Settings Menu" in the Reports Menus section of this manual.

6.9.19 Location ID

This setting is use to set a unique identifier for each machine. This number will show up on audit reports to identify the location of the machine or can be used as a unique identifier for 3rd party card or POS systems.

6.9.20 Coin acceptor error takes the machine offline

Disable if coin
errored? NO

YES – The machine will go offline if the coin acceptor has an error.
NO - The machine will continue to operate if the coin acceptor has an error.

6.9.21 Bill acceptor error takes the machine offline

Disable if bill
errored? NO

YES – The machine will go offline if the bill acceptor has an error.
NO - The machine will continue to operate if the bill acceptor has an error.

6.9.22 Card system or card reader error takes the machine offline

Disable if card
Errored? NO

YES – If the machine loses communication to the card reader or if the card system has an error the machine will go offline.
NO - The machine will continue to operate if the card reader or card system has an error.

6.9.23 Button Light Mode

Btn Light Mode
←Flash Down→

- **Flash Down** – The button lights will flash individually starting from the top selection to the bottom selection and then repeat.
- **Flash Up** – The button lights will flash individually starting from the bottom selection to the top selection and then repeat.
- **Flash Up Down** – The button lights will flash individually starting from the bottom selection to top selection then back down to the bottom selection and then repeat.
- **Lights OFF** - All button lights will be OFF.
- **Lights ON** - All button lights will be ON.

Sets the way the selection buttons light when the machine is in an idle state.

6.9.24 Button Light Delay

Btn Light delay
0 secs

Enter the delay in seconds before the button light pattern will repeat. If you enter a 0 there will be no delay.

6.10 Prompts

A prompt is the message, voice and / or text, that is given to the user to instruct them on what to do next or to advertise something to them. The Welcome Prompt in particular can be a very effective advertising tool for letting users know that you have a promotion running.
This section explains how to select a pre-programmed prompt (from a list of preset messages), create a custom prompt, or disable a prompt.

 If your machine includes the optional voice module you will want to make sure the displayed message and voice message correspond to each other. There are three types of prompts available:

- Instruction Prompts are used to let the user know how to use the machine or what to do next. Examples: "deposit money or make selection" or "proceed to wash bay".

- Advertising Prompts are used to welcome your patrons and market your goods and services. Examples: "welcome to the carwash" and "please visit our vending area for drying towels, air fresheners or snacks". Use these prompts to let people know about specials you are running, new products you are offering, cross promotions (with other companies like nearby restaurants, etc.)

- Status Prompts are available to let the user know if the machine is unavailable or if it is in the "exact change only" mode.

6.10.1 Custom Text and Voice Prompts

Customizing these prompts are a very effective way to promote the goods and services at your site or to cross promote for another site. Custom voice prompts are available from the factory. These can be added to the machine at any time. For custom voice prompts, contact the factory or your distributor. If the available "standard display prompts" do not meet your needs, you can easily enter the text yourself. This is described below.

6.10.2 Changing a Prompt

To change a prompt selection you will first enter the Main Menu, find "Prompt Settings" and then press the down arrow button to find the prompt you would like to change. See the list below for the available prompts. You can set the prompt to one of the preset prompts or you can set it to display a "custom" prompt or "no prompt". Also, if your machine is equipped with the Voice Module option you can play the voice prompt for each of the preset prompts to make sure it matches the displayed prompt. Both male and female voice prompts are available. You will need to specify which you would prefer when ordering the optional Voice Module.

There are preset messages available for each prompt. The first message in the list of welcome prompts is labeled "Welcome 1". To view the text that will be displayed on the top line of the user display when this prompt is played, press the down arrow button. Note - If your machine is equipped with the optional Voice Module, the corresponding voice message will play at this time.

You should now see the portion of the prompt message that the user will see on the top line of the user display. Press the down arrow button again to see the portion of this message that will be displayed on the second line of the display. It is important to note that some messages are large enough that they cannot be displayed all at one time. When this occurs the user will see the first part of the message on the display and then the display will change to display the next part of the message. For large messages you will need to press the down arrow button multiple times to see the entire message that the user will see.

In addition to the preset messages, the prompt can be disabled or a custom message can be created. Choosing the "Welcome None" message option will disable the Welcome Prompt. Choosing the "Custom" message option will allow you to enter a custom prompt message. See the section below for information about *Entering a Custom Prompt*.

Welcome Prompt - The welcome text prompt is used to greet your customers when they pull up to the machine. You can also disable the text and audio prompt by setting it to "none". The audio prompt is only played when the customers' vehicle is detected by the optional proximity sensor.

- Welcome 1:   "Hello"

- Welcome 2:   "Welcome, have you checked out our specials today"
- Welcome 3:   "Welcome"
- Welcome 4:   (reserved for future expansion)
- Custom: (see section below for entering a custom prompt)
- Welcome None: (disable this prompt)

Up Sell Prompt -This prompt is used for advertising, it provides a second chance to promote your goods and services. This is also ideal for marketing your drying towels, air fresheners, etc. that the user will be thinking about as soon as they have a clean car again. The text and audio is played after a patron has purchased a wash, the receipt is printed (if selected) and change dispensed (if needed).

- Up Sell 1:   "For drying towels, window cleaners and air fresheners please visit our vending area"
- Up Sell 2:   "For drying towels please visit our vending area"
- Up Sell 3:   "We now have a pet wash bay"
- Up Sell 4:   (reserved for future expansion)
- Custom: (see section below for entering a custom prompt)
- Up Sell None: (disable this prompt)

Entry Prompt –This prompt is used to instruct the user when it is time to proceed to the bay. The text and audio are played after the Up Sell Prompt. If you use entry lights you would tell the user to proceed when the light turns green, etc. This prompt is often used to thank the customer for their patronage and it provides one more opportunity to promote your goods and services. Ex: Proceed to the bay when the light turns green. Thank you for using our carwash and don't forget about the free vacuum token with the purchase of the Deluxe Wash.

- Entry 1:   "Thank you and have a nice day"
- Entry 2:   "Drive forward and have a nice day"
- Entry 3:   "Have a nice day"
- Entry 4:   "Please wait for green light to pull forward"
- Custom: (see section below for entering a custom prompt)
- Entry None: (disable this prompt)

Out Of Service (OOS) Prompt – This prompt is a status prompt. It is played whenever the machine cannot process transactions and therefore requires service. If the machine was unable to complete a refund the amount owed to the user will also be displayed. This prompt can be used to ask the patron to call the owner.

- Out Of Service 1: "Please see attendant for car wash"
- Out Of Service 2: (reserved for future expansion)
- Out Of Service 3: (reserved for future expansion)
- Out Of Service 4: (reserved for future expansion)
- Custom: (see section below for entering a custom prompt)

Offline Prompt – This prompt is a status prompt. It is played whenever the wash bay is not available to use. This can occur when the machine is in the "Sleep Mode" or when it is placed off line using the "remote offline" feature available with the Alarm Dialer option. This prompt can be used to show the hours of operation for the wash bay.

- Off line 1:   "We are sorry, the carwash is now closed"
- Offline 2:   "Our carwash is currently closed"
- Offline 3:   (reserved for future expansion)
- Offline 4:   (reserved for future expansion)
- Custom: (see section below for entering a custom prompt)
- Offline None: (disable this prompt)

6.10.3 Entering a Custom Display Prompts

If the available "standard display prompts" do not meet your needs, a custom prompt can be used. To create a custom prompt, press the down arrow while the display is at the "custom" setting for the prompt. Using the User Keypad on the front of the machine, you can now enter the text message much the same way you would create a text message or an address book entry using a cell phone.

Keep in mind that the user will see a top line and a bottom line on the User Display. Enter the text, including spaces, exactly as you want it to appear to the user. If the message is longer than two lines (top and bottom) you can enter additional message text on another display screen (top and bottom). To get to the next display screen simply press the down arrow button. You can have up to 4 display screens. We recommend short and concise messages so the message is displayed quickly and is easily understood.

Use the Display Template below to layout the custom prompt message you wish to display.

DISPLAY TEMPLATE

					W	E	L	C	O	M	E		T	O				

Top Line (above)

			S	U	N	S	H	I	N	E		C	A	R	W	A	S	H		

Bottom Line (above)

6.11 Discount Type Settings

This is used to setup codes, tokens and coupons that can be used in all of your promotions. When used the name of the discount type will be used on the display and on receipts.

6.11.1 Setting Up Discount Codes

> Note – the user must press the "ENT" button before the machine will process the code number.

There are three steps required to setup the code discounts: identify the number of different codes to be used, give a *name* to each one and *create* the code numbers. Note - Up to 20 different codes can be setup.

Step 1 – Identify the *number* of different codes to be accepted.
Step down into the menu until you see [maximum number] on the top line of the display and [of codes] on the bottom line. Enter the number of different codes you plan to use. Up to 20 different codes can be used. Setting this to zero will bypass setting up codes. Step down in the menu after answering this question.

Step 2 - Setup a custom name for each different code used. Each code has a *generic label* and a *name* associated with it. The default *name* assigned to each code is the same as the *generic label*. Changing the name can make it easier to distinguish one code discount from another when you are viewing the associated Promotion Audit. The audit totals will be listed under the *name* of the discount type, not the *generic label*. The top line of the display will now show [code 1 name], which is the *generic label* for this discount. The generic label cannot be changed, The bottom line of the display will show [CODE 1]. The cursor will be flashing under the first character of the *name*. You can now change the name using the text entry method. Hint – same as a cell phone text entry. Press the down button to go to the next step.

Step 3 – Create the code number.
The display will show the code name you entered in step 2 on the top line and the bottom line will show [# # # #]. Enter the code number to be used. The code can only include numbers, no characters or symbols. The user code numbers can have as few as one number or as many as six numbers in the code. We recommend the code length be at least four digits long. Press the down button to go to the next code at step 2.

6.11.2 Setting Up Coupons

> ******* **IMPORTANT** ********
> Only "Free Vend" coupons should be used in any bill acceptor that is installed in the GXP. This will prevent the possibility of "Cash Value" coupons being used to refund actual change (cash). Cash Value coupons are pre-encoded by MEI to be accepted as a $1, $5, $10 or $20 bill. Free Vend coupons are printed so they have "no cash value" encoded in them. If you install an existing bill acceptor and are not sure if coupons were programmed into it, you should clear the coupon acceptance from the acceptor. For the procedure necessary to clear previously programmed coupons from the MEI bill acceptor, contact your nearest MEI or SCM service center.

There are five steps required to setup the coupon discounts: *train* the acceptor to recognize the coupons to be accepted, identify the number of different coupons (different coupon designs) to be used, give a *name* to each one, determine if it will be used as a credit or a discount towards a wash package(s) and then programming the GXP to recognize the coupon. Note - Up to four different coupons can be setup.

Step 1 - Program the MEI bill acceptor to accept the coupon. You must *train* the MEI bill acceptor to recognize the coupon when it is inserted. If you are using multiple coupons they can all be programmed during this step. The machine should be in the normal run mode (user mode) when training the acceptor to recognize the coupon. See the decal on the back of the MEI bill acceptor for directions. Follow the directions.
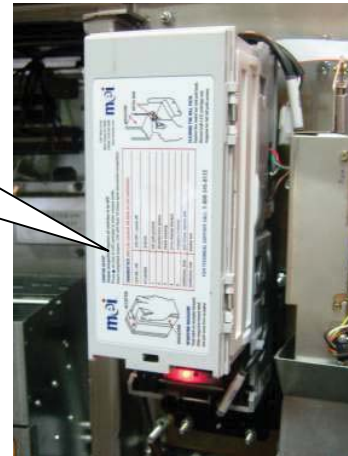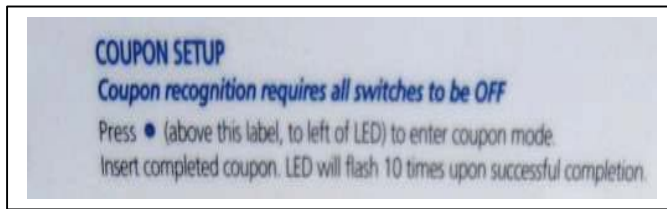
Step 2 – Identify the *number* of different coupons to be accepted.

Each coupon trained in the acceptor is considered a *different* coupon. Step down into the menu until you see [maximum number] on the top line of the display and [of coupons] on the bottom line. Enter the number of different coupon types you plan to use. It is not unusual to use only one coupon type. Up to four different coupon types can be used. Setting this to zero will bypass setting up coupons. Step down in the menu after answering this question.

Step 3 - Setup a custom name for each different coupon type accepted.

Each coupon type has a *generic label* and a *name* associated with it. The default *name* assigned to each coupon type is the same as the *generic label*. Changing the name can make it easier to distinguish one coupon discount from another when you are viewing the associated audit. The audit totals will be listed under the *name* of the discount type, not the *generic label*. The top line of the display will now show [coupon 1 name], which is the *generic label* for this discount. The generic label cannot be changed, The bottom line of the display will show [COUPON 1]. The cursor will be flashing under the first character of the *name*. You can now change the name using the text entry method. Hint – same as a cell phone text entry.

Step 4 – Select if the coupon can give credit towards a wash package or it will give a discount to a wash package.

- If you select YES multiple coupons can be used towards the purchase of any wash package. This coupon will not show up as a selection in *Promotion Settings*, but it can be used towards the purchase of a wash package in a promotion. Next you must enter a value this coupon is worth. If cancel is pressed the user will not get change back for this credit.
- If you select NO only one coupon will give a discount to a wash package. If cancel is pressed the user will not get change back for this discount.

Step 5 – *Associate* the coupon to the *generic label* you want to use for it.

The display will now show [coupon 1] on the top line of the display. The bottom line of the display will indicate if a coupon has already been *associated* with the *coupon 1* position. If the coupon has already been *associated* for this position the bottom line of the display will show [programmed]. If you are changing a coupon that was previously programmed in this position (coupon 1) or you are programming a new coupon in this position, then deposit one of the coupons into the bill acceptor at this time. Within a few seconds the bottom line of the display will show [programmed]. This indicates that the coupon is now associated with this position (generic label & name). Press the down button to go to the next coupon step 3

6.11.3 Setting Up Tokens:

There are four steps required to setup the token discounts: *train* the acceptor to recognize the tokens to be accepted, identify the number of different tokens (different token designs) to be used, give a *name* to each one, determine if it will be used as a credit or a discount towards a wash package(s) and then programming the GXP to recognize the token. Note - Up to 4 different tokens can be setup.

Step 1 – Program the IDX coin acceptor to accept the token(s). The following procedure is used to accomplish this. You will need 6 samples of each different token to be used. If you are using multiple tokens, all of them will be trained during this procedure. The coin acceptor can distinguish between 4 different token designs so up to 4 different token types can be used. When the acceptor has been trained for each different token type, proceed to the next step.

- Remove the coin acceptor assembly from the machine. The coin acceptor is held in by either four #6-32 nuts or two #10-32 nuts.
- With the acceptor plugged in, slide the front cover up using your thumb as shown below and identify the three controls to be used in this procedure; rotary dial, push button and LED.
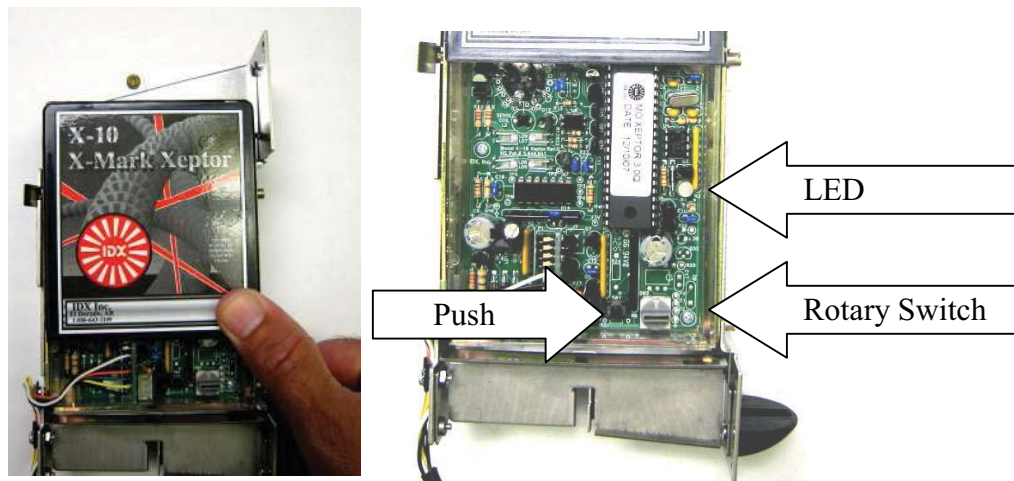
- Set the "rotary switch position" for the first token. The first token will be rotary switch position 3. Position 3 is reserved for the generic label "Token 1". Note – you will use position 4 for "Token 2", position 5 for "Token 3" and position 6 for "Token 4" in future steps. **Coin programming note**: if you are training the acceptor to take quarter coins then use rotary switch position 1, use switch position 2 for $1 coins.
- Press the black button once for Token 1, twice for Token 2, 3 times for token 3 and 4 times for token 4. **Coin programming note**: Press the black button once for Quarters and four times for $1 coins.
- Very Important - Slide the cover back on the unit each time you are training a new coin to make sure outside light (sun light) does not interfere with the optical coin sensors.
- Deposit 6 of the same token. The LED should flash red-green a few times to indicate the token is stored.
- Turn the rotary switch to position 0. The LED should be green.
- Repeat the above steps for each token (or coin) to be trained. Be sure to change the "rotary switch position" to the corresponding generic token each time you program a new token.
- Slide the cover closed and install the coin acceptor into the machine.

Step 2 – Identify the *number* of different tokens to be accepted.

Each token trained in the acceptor is considered a *different* token. Step down into the menu until you see [maximum number] on the top line of the display and [of tokens] on the bottom line. Enter the number of different token types you plan to use. It is not unusual to use only one token type. Up to four different token types can be used. Setting this to zero will bypass setting up tokens. Step down in the menu after answering this question.

Step 3 - Setup a custom name for each different token type accepted.
Each token type has a *generic label* and a *name* associated with it. The default *name* assigned to each token type is the same as the *generic label*. Changing the name can make it easier to distinguish one token discount from another when you are viewing the associated audit. The audit totals will be listed under the *name* of the discount type, not the *generic label*. The top line of the display will now show [token 1 name], which is the *generic label* for this discount. The generic label cannot be changed, The bottom line of the display will show [TOKEN 1]. The cursor will be flashing under the first character of the *name*. You can now change the name using the text entry method. Hint – same as a cell phone text entry. Press the down arrow button to proceed to the next step.

Step 4 – Select if the token can give credit towards a wash package or it will give a discount to a wash package.
▪ If you select YES multiple tokens can be used to purchase a wash. Next you must enter a value this token is worth. This token will not show up as a selection in *Promotion Settings*, but it can be used towards the purchase of a wash package in a promotion. If cancel is pressed the user will not get change back for this credit.
▪ If you select NO only one token will give a discount to a wash package. If cancel is pressed the user will not get change back for this discount.

Step 5 – *Associate* the token to the *generic label* you want to use for it.
The display will now show [token 1] on the top line of the display. The bottom line of the display will indicate if a token has already been *associated* with the *token1* position. If the token has already been *associated* for this position the bottom line of the display will show [programmed]. If you are changing a token that was previously programmed in this position (token 1) or you are programming a new token in this position, then deposit one of the tokens into the acceptor at this time. Within a few seconds the bottom line of the display will show [programmed]. This indicates that the coupon is now associated with this position (generic label & name). Press the down button to go to the next token at step 3.

6.12 Bill Dispenser

This menu should only be used if you have a bill dispenser connected to the control board at connector J8. If you make a change to the bill dispenser model or value of the cassette it will be necessary that you reset the control board before these changes can take affect in the rest of programming.

Note: Cassette one is at the top of the bill dispenser.

The following setup procedure applies in version 3.040 and higher of the Controller (EFII) Module

6.12.1 Bill Dispenser Model

dispenser model

←none→

- **none –** A bill dispenser is not connected
- **F50 (1) cassette** – A Fujitsu model F50 bill dispenser is connected. This model only has one cassette.
- **F53 (2) cassette** – A Fujitsu model F53 bill dispenser is connected with two cassettes.
- **F53 (3) cassette** – A Fujitsu model F53 bill dispenser is connected with three cassettes.
- **F53 (4) cassette** – A Fujitsu model F53 bill dispenser is connected with four cassettes.

6.12.2 Cassette Value

cassette 1
value $0.00

Enter the value of the coupon or bill loaded in the cassette.

6.12.3 Cassette Type

cassette 1 type
←bill→

- **bill**
- **coupon**

Multiple choice between bills and coupons.

6.12.4 Cassette Low Count

cassette low count
*   30*

Enter the number of bills or coupons that can be dispensed past a sold out condition. Do not set this count too high as it will allow the dispenser to run empty which could result in a short pay to the user if the machine cannot transfer the unpaid balance to another dispenser. This applies to all of the cassettes.

This feature is typically used to decrease the number of bills remaining in a bill dispenser compartment (cassette) before it reports that it is sold out. Use this to allow between 0 and 255 additional bills to be dispensed after the bill compartment senses it is sold out. The number of bill remaining after the bill compartment senses a sold out will vary depending on the condition of the currency being used.

6.12.5 Cassette Override

cassette override 1
*   NO*

YES – This will allow this cassette to dispense every bill before the next cassette with the same bill value is activated. The cassette will dispense until it is empty.
NO – The cassette will use its' internal sold out detector to determine when the cassette is empty.

This feature can be used to maximize the dispense capacity of bill dispenser that has two or more cassettes loaded with the same value of bill. Setting the "override" to YES for a cassette will disable the sold out detector and allow the 40-70 bills that typically remain, to be dispensed. This feature will allow one cassette to dispense every bill before the next cassette with the same bill value, is activated.

Note: This applies to coupons also. Coupons and bills of the same value are treated seperately.

6.13 Promotions

An effective promotion can help you make more money. An effective promotion will provide the user with either a discount that can be applied toward the purchase of one or more of the wash packages you intend to promote, or with the ability to direct a "charitable contribution" toward a charity that you are collecting funds for. Multiple promotions can be offered during the same time period. When designing the promotion keep in mind that you can quickly check the effectiveness of a promotion by viewing the Promotion Audit Report associated with each promotion. It is helpful to give each promotion a different name so you can view the report associated with each promotion. Example: you can run a code based promotion and advertise it on a billboard at the same time you are running a code based promotion that is being advertised through a mass mailer coupon company. By using separate codes for each promotion you can determine which one is most effective by viewing the report for each promotion. Your distributor is a good source for help in developing a successful promotion. They can also assist in setting up any advertising that will be presented at the machine, i.e., the Welcome Prompt advertisement.

6.13.1 Planning a Promotion

Care should be taken to think through all of the factors related to developing an effective promotion. Below are the factors related to developing an effective promotion and marketing campaign. Review all of these before attempting to setup a promotion in the GXP machine. Once you have a well thought out plan, proceed to setting up the discounts using the Discount Type Settings menu and then setup the promotion using the Promotion Settings menu.

Identify the Goal Of the Promotion: Identify the overall objective of your promotion. It may take multiple promotions to obtain your goals. Common goals of a promotion are: to obtain new customers, maintain existing customers, promote new products and services to existing customers, get existing customers to utilize your wash during the slower periods ("load balancing"), and to cross promote for another nearby business so they do the same for you.

Advertising your promotion: **There are a variety of advertising methods that can be used to get the word out about your promotion. You should always consider using the Welcome Prompt and Receipt Printer to let existing customers know about your promotion. The Welcome prompt, text and voice, should let the user know about anything you are promoting at your site. The receipt printer can be setup to include a message that advertises your promotion as well. You can also use some of the advertising methods shown below.**
- Letters to local fundraisers like the school band.
- Radio & news paper
- Mass Mailers
- Co-Marketing with another local business
- Direct Marketing to local charities – schools, fundraisers…

- Word of mouth – secret code that no one knows about but be sure to tell everyone. Human nature is to take advantage of a good thing before it is gone.

Naming the Promotion: Give the promotion a name that you can easily recognize and distinguish. Common examples are: Early Bird Special, Night Owl Special, Coupon Promotion, Mailer Promotion. These names will show up on the Promotion Report and are helpful in distinguishing one from the other if multiple promotions are running simultaneously.

Duration of Promotion: Identify how long do you plan to run the promotion, start and end dates and times.

Type of Discount(s) to Use With the Promotion: A variety of *discount types* can be used with the GXP. Codes, Tokens, and Coupons are all discount types that can be used in a promotion. To identify the discount type best suited for your promotion, you must first determine the most economical and effective way to get the discount into the hands of the target customer. Another consideration is the advertising method you plan to use. The method for advertising the promotion is sometimes determined by the discount type media that you believe will be most effective. For example, if you want to bring new customers in to your site from nearby zip codes, a mass mailer service like Value Pack can be used to target specific zip codes. If mass mailers are the advertisement of choice then you will want to use Code Entry as the discount type. The advertisement coupon you have developed would identify the discount code the user would enter, the amount of discount they will receive for the wash package(s) you are promoting, and it would tell them where you are located. In this example it is neither practical nor economical to use tokens or bill acceptor coupons to promote your product.

Following is a list of discounts that can be used with the GXP machine.
- *Time of Day / Day of Week* – ideal and economical way to load balance. Load balancing is where you encourage customers to use your wash during slow periods so full price customers are not turned away during peak usage periods.
- *Code* – code that the customer enters on the keypad of the machine. Codes are ideal and economical way to *gain new customers*. It allows a user to enter a code and receive a discount off of any or all wash selections. Code based promotions are a very cost effective way to promote your automatic bay wash services. You can advertise a code promotion using billboards, newspapers, mailer coupons, etc. Codes can be 4, 5 or 6 digits long. A 4-digit code is typically used. It is <u>important to note</u> that the "ENT" (enter button on the user keypad) must be pressed after the user has entered the code. This instruction should be included in any advertising.
- *Tokens* – security tokens made by IDX. Security tokens are ideal for providing a dissatisfied existing customer with a free wash.
- *Coupons* - Coupons are ideal joint marketing or mass marketing tool.

> ******* **IMPORTANT** ********
> Only "Free Vend" coupons should be used in any bill acceptor that is installed in the GXP. This will prevent the possibility of "Cash Value" coupons being used to refund actual change (cash). Cash Value coupons are pre-encoded by MEI to be accepted as a $1, $5,$10 or $20 bill. Free Vend coupons are printed so they have "no cash value" encoded in them. If you install an existing bill acceptor and are not sure if coupons were programmed into it, you should clear the coupon acceptance from the acceptor. For the procedure necessary to clear previously programmed coupons from the MEI bill acceptor, contact your nearest MEI or SCM service center.

6.13.2 Setting Up a Promotion – Promotion Settings Menu

The following setup procedure applies in version 2.009 and higher of the Controller (EFII) Module.

Up to 29 discounts (1 time based discount, 4 coupons, 4 tokens and 20 codes) can be applied during each promotion. Up to 16 promotions can be active at any given time. A promotion is typically defined as having a beginning date / time and an ending date/time and some number of discounts that apply during the promotion date/time period. Multiple promotions can be setup to run during the same time frame if more than the allotted discounts (29 total per promotion) are needed.

To set up a promotion you will first setup the discount types to be used. See the section of this manual titled "Discount Type Settings" for directions on setting these up. Do this before proceeding with the Promotion Setup process. It is important to note that the user of the machine can only apply one discount toward the purchase of a given wash. They cannot for example, deposit two tokens, or a code and a token, or a code and a coupon, and receive multiple discounts toward the purchase of a single wash. If multiple discounts are deposited, the one that would provide them with the greatest value will be applied toward the wash purchase. Note: If you have setup a coupon or token as a *credit* then the user can accumulate credit along with a discount used in a promotion.

After the Discount Type Settings are setup, find the "Promotion Settings" menu. Drill down into this menu and answer the questions using the information from the promotion that you have designed. You will be asked some basic questions related to which days of the week the promotion will be active, how long during the day it will be active, and which discount types will be applied during the time that the promotion is active. If at any time you have a question just press the help button (# / ENT) button on the user keypad.

Important Notes:
- Remember that it is very important to design the promotion on paper before trying to set it up in the machine.
- It is a good idea to clear the promotion audit after you have made a change to it so your accounting starts at zero.

6.13.3 Programming Steps:
- Enter the Main Menu mode by pressing the two red buttons simultaneously on the EF Module (controller in machine) and holding them for three or more seconds.
- Using the right arrow button find the "Promotion Settings" menu item.
- Using the down arrow button drill down into the *Promotion Setting* menu until you find the "Edit Promotion?" question and answer Yes (button 9 on user keypad).
- Enter an answer for each question and then press the down arrow button to proceed to the next one. Following is a list of the entries you will make. Remember that there are only four types of entries and each can be quickly identified by the message on the display. See the section of this manual titled "Menu Entries / Questions" for directions on how to enter information into a menu.
- Below is a list of the questions you will be asked:
- Enter Name – enter the name of your promotion.
- Promo Begin – enter the date the promotion will start.
- Promo End – enter the date your promotion will end. If you do not want to set an actual end date just set it very far into the future.

- Sunday – enter the duration the promotion will run on Sunday's. IF you want it to run on Sunday answer Yes button (button 9 on user keypad). Next answer if you want it to run all day. If you select No then you will be prompted for a starting time and an ending time. Repeat this for each day of the week.
- Coupon 1 ? - This is where you select a discount type that will be valid during the promotion. The discount types are: time, code 1-20, coupons 1-4 and tokens 1-4. If the discount type displayed is not the one you want to apply then answer No (button 6 on user keypad). Step through each discount type until you find the one (or ones) you want to apply during this promotion. Press the Yes button (button 9 on user keypad). Note – if you select "Time' as the discount type, the time you set for the promotion is the time the discount amounts (next step) will be active.
- "Wash 1 $X.XX $x.xx discount off" this is where you enter the discount to the wash package you are viewing. The wash name will appear here along with the normal price of the wash package. Enter the amount of discount to be applied. If this wash package will not be discounted then leave the discount amount set to zero. Repeat this for each wash package. Press the down button to advance to the next step.
- "Wash 1 $X.XX $x.xx to charity" this is where you enter the amount to go to a charity for the wash package you are viewing. The wash name will appear here along with the normal price of the wash package. Enter the amount of to go to the charity. If money will not be applied towards a charity then leave this amount set to zero. Repeat this for each wash package. Press the down button to advance to the next step.
- Enable Promotion – This is the last step. You can activate the promotion at this time if it uses "time" based discount types or if you have already programmed (associated) the coupon, code or tokens with the generic labels for each. You can also come back later and disable this promotion without clearing everything you have entered.

7.0 REPLACING THE PRICING PLACARD

The pricing placard is simple to make and to replace. You can use a simple text editing program like Microsoft Word to design the new placard and then you can laminate it for water protection. Use black inks in place of color ink, as the black will hold up longer when exposed to the UV rays from the sun. To replace the old placard simply release the associated placard screw on the back of the cabinet until the placard is free enough to slide out of the holder. It is not necessary to remove the screw, just loosen it. Remove the old placard and install the new one and then tighten the screw securely. See the picture below for details.

Placard Screw
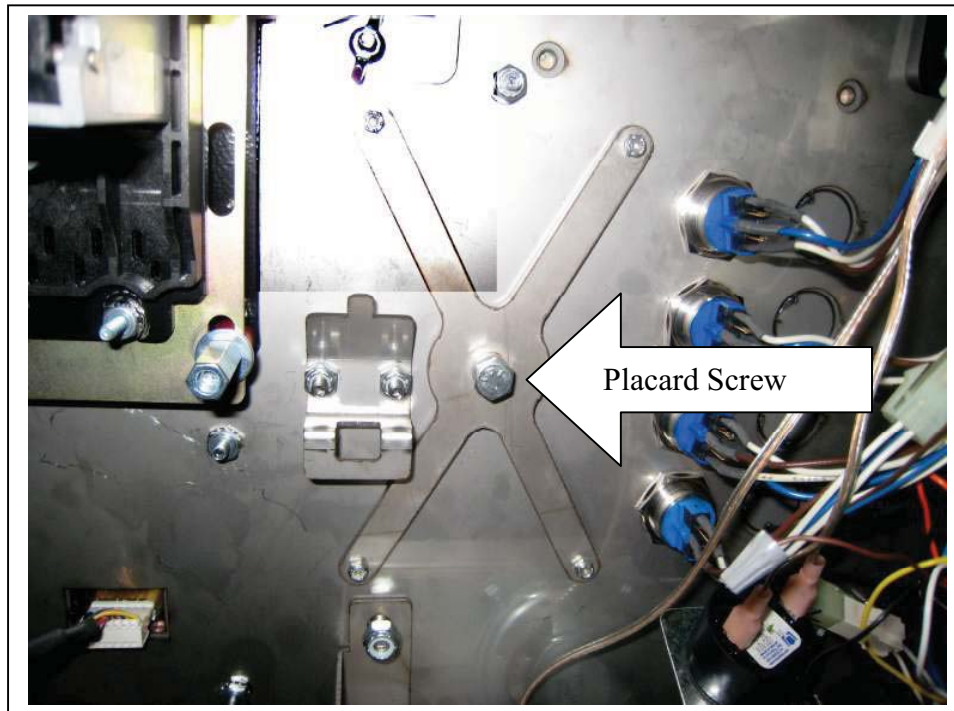
8.0 DATACAP CREDIT CARD MODULE

The Credit Card Module is based on the same technology that is used in the credit card terminals found at the major super market store checkout lanes. A credit card terminal will include a *card reader*, a *modem* and a *display* for prompting the user with credit card related instructions such as "swipe card", "card not read", "card authorizing", etc.

UNDERSTANDING CREDIT CARD PROCESSING:
For a basic understanding of how any credit card processing systems work, refer to the publication that was provided with the sales literature. This publication provides a description of each step required to get an electronic transaction from the card terminal to the card processor for authorization, and then to get the electronic funds transferred from the card processor to your bank account. Consult the factory for details.

PROGRAMMING YOUR CREDIT CARD SYSTEM. All machines equipped with a Credit Card Module have been factory programmed to match the Machine Configuration Form that was submitted at the time of order. If it should become necessary to alter any of these program settings, please refer to the Credit Card Settings in the main menu of the machine and press the help button to learn more about each setting.

The credit card terminal is comprised of a card reader and a modem. The modem shown here is the Data Tran 162SL. This is the box that connects to the phone line.

8.1.1   High Speed Modem

HIGH SPEED CARD PROCESSING: Some credit card processors allow high speed card processing. If your machine was ordered with this capability, it will be equipped with an IP Tran module. This module will be located outside of the machine unless it has been mounted prior to shipping.
A device capable of being set as a DHCP server (router or switch) must be present at the site. This device is not provided with the machine. The router or switch must be set to identify the Internet Service Provider (company providing the DSL or cable service) as the DNS source. It must also be set as the DHCP server. Both of these settings are configured in the device. Support questions for these settings should be directed to the company the device was purchased from. Example device is a Linksys router P/N – BEFSR41.

WIRELESS HIGH SPEED CARD PROCESSING: This option can be used in conjunction with a wireless modem / router to create a "wireless network". Wireless networks are useful in locations where the machines are frequently moved around the building, where high-speed cable connections are not present or practical, or where multiple machines will share the same high-speed line connection.

A good working knowledge of routers and wireless modems is required for this type of connection. Support for questions related to high speed connections, wireless connections and networking should be directed to the company that is providing high speed connection and / or the company that is providing the related third party router or wireless modem hardware.

IPTRAN – High Speed Connection

The IPTRAN provides the high speed option when combined with the DataTran modem. This device has an ethernet port that connects to a router capable of supplying a dynamic IP address.

9.0 POS4000 CONNECTIONS

Connecting A POS (Point Of Sale) Terminal

Connecting a Point Of Sale System
There are a variety of POS systems available. You should always contact your POS manufacturer with any questions regarding the operation of the POS terminal, the reports that are available through the terminal and for setup questions.

Synchronize the POS audit to the machine audit by clearing both the POS terminal audit and machine audit at the same time.

Steps required to enable the GXP machine to communicate to a POS4000

1. Enter programming mode
2. Go to OTHER SETTINGS
3. Go to down to "location id" set the value to the next sequential POS unit number (if only master console and the Guardian set this to "2")
4. Go to POS SETTINGS and set the POS type to "Unitec POS4000"
5. Exit programming mode.

The POS system will show up in the configuration report if communication is active. If no communication occurs after 30 seconds a COMM LOST from POS code will occur.

POS4000 Operating Hints

- For information related to setting up and connecting a POS4000 terminal to the GXP machine, consult the "Installation Quick Guide".
- All POS4000 codes will end in "0". As long as the code ends in a "0" and it is 5 characters in length, the GXP will be able to distinguish a POS generated code from a discount code. Discount codes should not end with a "0" and be 5 characters in length.
- A discount code cannot be used in conjunction with a POS code. The discount would have been applied at the time the POS code was sold, not at the time it was used at the machine.
- The accounting information for the GXP is included in the POS4000 summary report. The report generated by the GXP should not be used if the POS4000 is connected. The POS4000 is the master for the reporting.
- The POS4000 is capable of generating wash codes and fleet codes. Wash codes are one time use and have an expiration date assigned at the POS4000 terminal. Fleet codes can be used multiple times and typically do not have an expiration date assigned.

The controller in the GXP should have an EFII board equipped with an RS485 header and connector, and a program version 2.009 or higher. The POS 4000 should be equipped with the Unitec version of software. **NOTE:** *JP7 on EFII board must be jumped.

To enable the GXP to use the RS485 link to the POS4000, go to the Other Settings menu and set the Location ID to the next highest RS485 address number that was assigned to the POS4000. Example: if the POS4000 were assigned 1 POS is used, our location would be 2. Multiple POS locations may require us to try different location settings (2-99). These locations should be sequential.
- POS TYPE - Set to POS 4000

Auditing:

POS has it's own capabilities to show the total monies in for the selection prices. It will not show any discounts so the total money in will be less any discounts at the machine (Ex. Code, Token, Coupon, Early Bird). POS 4000 and the GXP audits will need to be cleared separately and at the same time to match.

Troubleshooting:

POS 4000 will show up in our configuration report. If we lose communication with the POS, we will record a "POS 4000-com lost" error.

POS 4000 has a "link test" that the owner can use to confirm it sees our system. The POS will have a "time out" error if it looses communication with the GXP.

Make sure a number has been entered at the location ID in "OTHER SETTINGS".

On advance replacements for the EFII board, make sure the proper software and Rev board is used.

No Comm- make sure the RS485 cable is terminated correctly and plugged into the correct locations.

10.0   CODE COMMAND CONNECTION

Steps required to enable the GXP machine to communicate to a Code Command POS system.
1. Enter programming mode.
2. Go to "POS SETTINGS"
3. Go down to "POS type" and select "Code Command".
4. Exit programming mode.

Note – The controller in the GXP should have a GXP EFII Control Module equipped with an RS485 header and connector, and a program version 3.038 or newer.

Hint - It is recommended that you set the "Link Down Alarm Active" to "Disable" in the Code Command. If it is Enabled the Code Command will sound an alarm and require that you hit any key to continue when you are in the GXP programming mode.

11.0   QUICKPAY CONNECTION

Steps required to enable the GXP machine to communicate to a Quickpay card system.
5. Enter programming mode.
6. Go to "CREDIT SETTINGS"
7. Go down to "card system" and select "Quick Pay".
8. Exit programming mode.

Note – Requires version 2.008 or newer in the GXP EF Control Module.

To program the merchant parameters into the controller.
1. Put the controller in "TEST transaction" mode. See controller documents for how to do this.
2. Make a valid selection on the GXP system.
3. Swipe the Merchant Programming Card. The Quick Pay Terminal will acknowledge on its display that it has been programmed.
4. Turn off the "Test transaction" mode when done to process card normally.

Troubleshooting:
Quick Pay Credit card setup and test: Check the "Credit Settings" menu and verify the Quick Pay has been selected in the "Card System" menu. You can verify the card reader and internal connections by following the credit card demo mode test procedure outlined in this manual.

If the Quick Pay controller is not accepting the Merchant setup card correctly make sure the "allow instant auth" setting in the Credit Settings Menu is set to "No".

Contact your Quick Pay card system supplier for assistance in using the remote to program the Quick Pay card terminal.

12.0   ONE CARD CONNECTION
The One Card card system utilizes a PC that is located in the equipment room.

Steps required to enable the GXP machine to communicate to a One Card card system
1. Enter programming mode.

2. Go to "CREDIT SETTINGS"
3. Go down to "card system" and select "One Card".
4. Program the Local IP address for the GXP system (recommended 192.168.1.101).
5. Program the Local Port to match the port setup in the One Card Software (recommended 13000). See appendix D Restrictions On Port Usage.
6. Program the Remote IP address for the PC system containing the One Card server software.
7. Program the Remote Port to match the port setup in the One Card Software (recommended 3000).
8. Exit programming mode.

Note – Requires version 2.033 or newer in the GXP EF Control Module.

Steps required to enable the GXP machine to communicate to a One Card card system
1. Contact your One Card system provider for this information.

Troubleshooting:
Reset the GXP after making changes to the network setting in the Credit Settings menu to activate them.
Use the Configuration Menu to see the current settings read from the Ethernet module.
When connected properly the IP address for the machine can be viewed in the "Configuration Report" Menu.

Under "CONFIGURATION REPORT" you will see "One Card is CONNECTED" if communication has been established. If communication to the One Card system is lost you will see "One Card is NOT CONNECTED".

What do the lights on the ethernet connector mean?

The bottom LED should be on green steady. The top LED should flash green when data is transmitting. Data should be transmitting at least once every 20 seconds. No flashing green light means no data present – check terminations at both ends and make sure the terminations are not inverted from one end to the other.

13.0   WASHGEAR CONNECTION

Steps required to enable the GXP machine to communicate to a Washgear card system
1. Enter programming mode.
2. Go to "OTHER SETTINGS"
3. Go down to "location id" and enter a number. This is used in the Washgear reports.
4. Go to "CREDIT SETTINGS"
5. Go down to "**card system**" and set to **wash gear only**. When the **"card system"** is set to Washgear, you will not be able to change the wash names, wash values or the clock of the GXP. This will be done by the Washgear card system.
6. Exit programming mode.
7. Press reset.

The Washgear card system version and the assigned IP address will show up in the "CONFIGURATION REPORT" when communication is active. If communication is lost for more than 60 seconds, the Washgear version is set to "not connected".

Operating Hints:

- For information related to setting up and connecting to a Washgear card system, consult the "Installation Quick Guide".
- It may require several minutes to connect to the Washgear system. This only occurs if you cycle power or reset the GXP.
- If not connected or while connecting to the Washgear card system cash can still be accepted for a wash.

The controller in the GXP should have an EFIII board equipped with an Xport ethernet device, and program version 3.033 or higher.

Troubleshooting:

When connected to the Washgear card system the Washgear version will appear in the "CONFIGURATION REPORT". If communication is lost the version will be replaced with "not connected".

After initializing, the GXP will be twice indicating that auto addressing is done. A third beep will occur when a connection has been made to the Washgear card system.

Make sure the Washgear is selected under "CREDIT SETTINGS" and that a location id has been entered in "OTHER SETTINGS".

On advance replacements for the EFII board, make sure the proper software version and board revision is used.

What do the lights on the ethernet connector mean?

The left LED indicates a connection. It requires a loop back from the other device. In other words for the light to be on it has to be connected at both ends.

The right LED indicates data flow. This can be just data out with no response.

1. Washgear is not selected and the cable is not connected.

   No LEDs on

2. Washgear is not selected but the cable connected.

   Left LED on steady green

   When power is cycled or the Guardian is reset.
      Left LED goes off while right led blinks orange

Then left LED is on steady green

3. Washgear is selected, the cable connected and after Washgear connection.

Left LED on
Right LED blinks green occasionally

Note:
This is the same if the Washgear application goes away.

4. Washgear selected, the cable is disconnected after Washgear connection.

Left LED off
Right LED blinks orange

14.0   WASHCARD CONNECTION

Steps required to enable the GXP machine to communicate to a WashCard card system
1. Enter programming mode.
2. Go to "OTHER SETTINGS"
3. Go down to "location id" and enter a number. This is used in the WashCard reports.
4. Go to "CREDIT SETTINGS"
5. Go down to "card system" and select "WashCard (only) if you do not want to accept credit cards". Select "WashCard & Datacap" if you want to accept WashCard gift and fleet cards and process credit cards.
6. Go down to "local IP address". You can set this to an address you want to use or clear it and your server will assign it.
7. Go down to "local port" and enter a port. The actual port may not be important as long as it is not zero. See appendix D Restrictions On Port Usage.
8. Go down to "subnet mask". You can set this or clear it and your server will assign it.
9. Go down to "remote IP address". This is the IP address of the WashCard server and it must be set. Please contact WashCard for this information.
10. Go down to "remote port". This is the port used by the WashCard server and it must be set. Please contact WashCard for this information.
11. Exit programming mode.
12. Press reset.

Under "CONFIGURATION REPORT" you will see "WashCard is CONNECTED" if communication has been established. If communication to the WashCard system is lost for more than 3 minutes, you will see "WashCard is NOT CONNECTED". You can also see the local IP address and subnet mask assigned by the server in "CONFIGURATION REPORT".

Operating Hints:

- For information related to setting up and connecting to a WashCard card system, consult the "Installation Quick Guide".
- It may require several minutes to connect to the WashCard system. This only occurs if you cycle power or reset the GXP.

- If not connected or while connecting to the WashCard card system cash can still be accepted for a wash.

The controller in the GXP should be an EFIII board equipped with an Xport ethernet device and program version 3.033 or higher.

Troubleshooting:

When connected to the WashCard card system you will see "WashCard is CONNECTED" in the "CONFIGURATION REPORT". If communication is lost for more than 3 minutes, the you will see "WashCard is NOT CONNECTED".

After initializing, the GXP will beep twice indicating that auto addressing is done. A single beep will occur when a connection has been made to the WashCard card system.

Make sure that WashCard is selected for the "card system" under "CREDIT SETTINGS".

On advance replacements for the EFIII board, make sure the proper software version and board revision is used.

What do the lights on the ethernet connector mean?

The left LED indicates a connection. It requires a loop back from the other device. In other words for the light to be on it has to be connected at both ends.

The right LED indicates data flow. This can be just data out with no response.

1. WashCard is not selected and the cable is not connected.

   No LEDs on

2. WashCard is not selected but the cable connected.

   Left LED on steady green

   When power is cycled or the Guardian is reset.
      Left LED goes off while right led blinks orange
      Then left LED is on steady green

3. WashCard is selected, the cable is connected and after connection with WashCard.

   Left LED on
   Right LED blinks green occasionally

   Note: This is the same if the WashCard application goes away.

4. WashCard selected, the cable is disconnected after connection with WashCard.

   Left LED off

Right LED blinks orange

15.0   TROUBLESHOOTING & MAINTENANCE

15.1 Condition Overview

General error conditions that occur in the "*machine*" will be shown on the user LCD display as soon as the "Menu Mode" is accessed. These errors along with other "events" can be viewed or printed from the Event Report menu. These are general error conditions that were encountered by the *machine*. A complete list of these errors is listed in the Machine Troubleshooting Chart found in section 12.1.5.

Some modules included in the machine can also report more details pertaining to their own error condition. The reporting methods used to identify these are referred to as "Flash Codes" because they use a series of LED flashes to provide troubleshooting information. As an example, a complete list of dispenser error "flash codes" is listed in the Flash Codes & Troubleshooting Chart in section 12.1.8 of this manual. The MEI bill acceptor used in the Guardian XP has a decal on the bill cassette, which includes a list of flash codes for that device.

Machine error conditions can either be "Soft Errors" which are errors that <u>DO NOT</u> result in the machine going out of service, or "Hard Errors" which are errors that <u>DO</u> cause the machine to be placed out of service. "Help" for some error conditions can be accessed much the same way as accessing the Help for Setting or Report menu items. To view the help information, press the "ENT" (same as Help) button on the user keypad while viewing the error condition. If you do not see the troubleshooting help information on the display after pressing the "ENT" (Help) button then additional help information has not been included for the error condition you are troubleshooting.

15.2 Viewing Machine Errors

To view a machine error you must first enter the "Main Menu" mode by pressing the two red buttons on the main control module and holding them for a minimum of 3 seconds. Upon releasing the buttons you will see the most recent error displayed on the User Display of the machine. If multiple errors exist, you can view the next one by pressing the Right Arrow button (selection 2 button). Repeat this until you see the "Main Menu" screen.

15.3 Resetting Machine Error Conditions

Error conditions can be cleared by first resolving whatever *caused the error,* and then pressing the button labeled "RESET" on the main control module. To determine the *error cause,* you must first identify the device that is in error. When entering the Main Menu mode, the device in error is shown on the top line of the display. If there are multiple devices of the same type, it may be necessary to view the flash code LED on each of the devices to determine which one caused the error.

15.4 Configuration Menu

The configuration menu is a powerful tool that can be used in diagnosing the root of most failures. The main control module of the Guardian XP communicates to all other components connected to it through serial communication. By simply viewing the Configuration Menu, you will be able to determine what components are available in the system, including information on the component type and software revision. Other information such as the Internet IP address for machines with an

optional IPTran for high-speed credit card transactions and third party card systems can be viewed, as well as a POS systems if applicable.

To access the Configuration Menu, enter the Main Menu and press the left arrow (selection 3 button) to "Configuration Report". Press the down arrow button (selection 4 button) to view the report and verify all the components found in the machine are displayed in the report. If any component is not being displayed, (example –No Bill acceptor found) check that component for failure. Most components will also have a status indicator for more detailed troubleshooting.

15.5 Machine Troubleshooting Chart

Shown below is a list of the *Error Conditions,* probable causes, and corrective actions for machine error conditions. Note that some of the error conditions indicate that you should contact the nearest factory authorized service center.
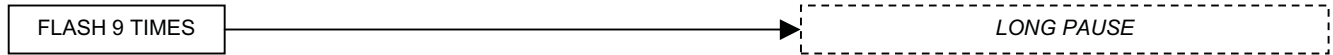
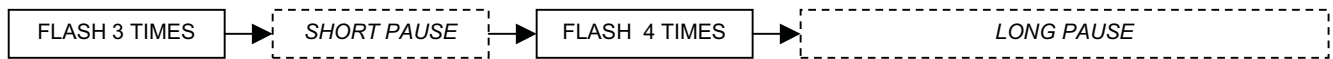|	
"SOLDOUT"	Indicates a dispenser does not have enough product to complete a vend. Check device.
"EMPTY"	A dispenser did not dispense in the allowed time and was not detected as sold out. Check device.
"JAMMED"	A dispenser is jammed and unable to dispense. Check device.
"PROGRAM"	Note the device in error and contact the nearest factory service center.
"EEPROM"	EEPROM failing. Note the device in error and contact the nearest factory service center.
"MOTOR"	Device has reported a motor error. Note the device in error and contact the nearest factory service center.
"SENSOR"	If device in error message is a bill acceptor, clear the bill path and clean sensors. If device in error message is a coin dispenser, contact the nearest factory service center.
"ROM"	Note the device in error and contact the nearest factory service center.
"PLC RUN"	The PLC operating mode switch is not in the run position.
"BILLBOX"	The bill acceptors' billbox has been removed. Replace the billbox then press the reset button on the control module to clear the error message.
"BILLBOX FULL"	The bill acceptor billbox is full.
"OVERPAY"	A dispenser has detected an overpay. Check device for debris at the output sensor.
"FAST VEND"	The total number of bills accepted has exceeded preprogrammed limit in the preprogrammed allowable time period. Adjust the Fast Vend Settings if necessary.
"TAMPER"	The bill acceptor has detected a stringing attempt. Clear the bill path and clean sensors.
"PLC DEVICE –EF "COMM LOST"	The control module can not communicate to the PLC. Check the cables connecting these two devices.
"POWER LOST"	Power was lost during a dispense. This is a "soft error" and the machine will stay online. Check all power connections in the machine. If this error condition occurs frequently, have the power source to the machine checked for faulty wiring, poor grounding, etc and add a power surge filter (same as used for computers) to the machine.
"ILLOGICAL"	Bills accepted and/or vend settings conflict with standard operating patterns. Common examples: No bills programmed to be accepted or revenue to be dispensed exceeds the value of the revenue to be deposited. Check ALL Vend settings.
"BILL ACC. - EF"	This message is displayed if the control module doesn't see any acceptor (Bill or Coin) in the system. Check acceptor cables and connections.
"PLC DEVICE –EF "WASH EQUIP"	The wash equipment has not acknowledged the wash or an error has been returned from the wash equipment.

15.6 Viewing Dispenser Errors

If an error condition is present on any dispenser, the *status LED* will be flashing at a rate of one flash per second and there will be a brief delay (LED will be off for approx. 3 seconds) between consecutive flashes. This flash pattern indicates an error condition. If this occurs, count the number of flashes between the pause. Do this several times to verify the correct *Flash Code* (number of consecutive flashes before the pause). Refer to the FLASH CODE DECAL easily viewable on the front of the junction box cover directly above the coin dispenser.

Following are examples of a dispenser flash code:

EXAMPLE OF A FLASH CODE ERROR 9

| FLASH 9 TIMES | ➔ | *LONG PAUSE* |

EXAMPLE OF A FLASH CODE ERROR 34

| FLASH 3 TIMES | ▶ | *SHORT PAUSE* | ▶ | FLASH 4 TIMES | ▶ | *LONG PAUSE* |

15.6.1 Flash Code Troubleshooting

Flash Code Troubleshooting - The purpose of Flash Codes are to assist you in troubleshooting failures that may occur during normal usage, and that do not require factory repair. *Example: a bent coin or a coin bag string that is stuck in the coin dispenser mechanism*. If you cannot resolve the issue in the field, contact your nearest service center or send the faulty module in for repair. Be sure to include a note that indicates the flash code error that was displayed as well as a detailed description of the circumstances (clues) surrounding the failure. These clues will assist the technician in quickly and accurately diagnosing the fault. This will ultimately reduce the cost of the repair.

Coin Dispenser w/o Door
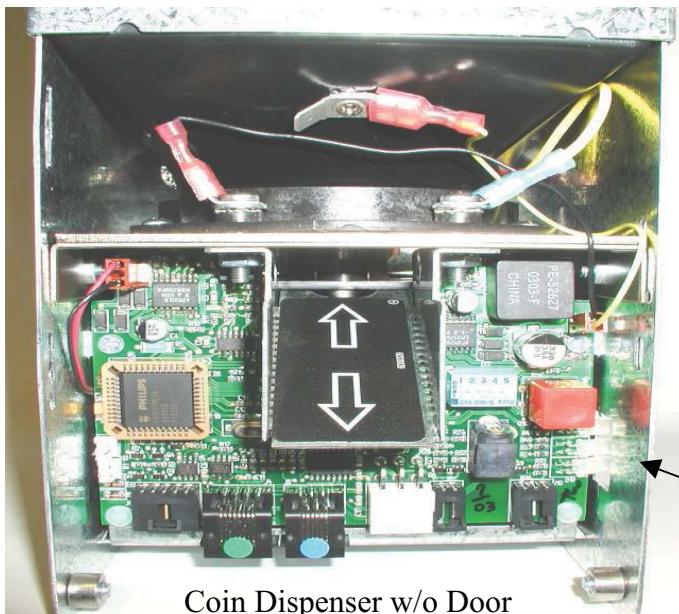
LED Indicators

Each dispenser's control board has three LED indicators to help determine the statues of that device. The top LED (yellow) is a status light that will display a flash code error if the dispenser is in fault. The middle LED (green) is the power LED and should be on whenever power is applied to the device. The bottom LED (red) turns on whenever the coin sensor is blocked.

STATUS LIGHTS

15.6.1.1 Dispenser Flash Code Chart

| Flash Code	TROUBLESHOOTING HELP & COMMON FAILURE SOURCES
1	THE DISPENSER IS **SOLD OUT**. This is a normal operating condition and it indicates that the dispense compartment needs to be refilled. Once refilled the error condition will automatically go away (reset). If this error is issued and the device is not sold out (near empty), check the device sold out sensing contacts / circuit for debris.
2	A **BILL ACCEPTOR** ERROR WAS DETECTED. The bill acceptor has detected an error. Check the items listed below. If this does help identify the problem source, note the flash code displayed on the bill acceptor and refer to the bill acceptor owners' manual for additional troubleshooting assistance. • Ensure the bill acceptor cable is plugged in properly. • Check the data cable (gray phone style cable labeled 4C00299) to ensure it is plugged in properly. The cable is color coded at each end. Be sure the blue cable end is connected to the blue connector on the circuit board.
3	THE **BILL STACKER** IS **MISSING** OR **FULL** – Empty the Bill Stacker and press the reset button on the Primary Device. If the problem persist, remove the bill stacker and look for dirt or debris in the acceptors bill path. Reinstall the bill stacker, making sure it latches securely in place.
4	A **BILL JAMMED** ERROR – The bill acceptor has detected a stuck bill or foreign object in the note path (path bill travels through the Note Acceptor). Remove the item from the note path. Note: If this problem persists, check the note path drive roller system for excessive wear (missing, cracked or stretched) on the belts or O-rings. Clean or replace as necessary.
5	A **FAST VEND** SHUT-OFF ERROR – An abnormal sequence (quantity in certain time period) of bills was deposited and the machine was automatically disabled. See section of this manual that discusses the Fast Vend Shut-off setting, for more details regarding this feature.
6	**STRINGING** WAS DETECTED – The stringing detection software has determined that a bill has been pulled out or attempted to be pulled out. Look for string, tape or debris. Balance (reconcile) your machine revenue.
7	A **COIN ACCEPTOR** ERROR WAS DETECTED. Check to ensure that a bent coin or piece of debris is not interfering with the coin deposit path. Check the associated cable (s) and connections.
8	A **DISPENSER** ERROR WAS DETECTED. • If the Sold-Out contacts for the dispenser have been bypassed, this error will occur when the dispenser becomes completely empty. Press reset after refilling the dispenser. • Check for debris in the dispense path of the associated dispenser - If blocked or dirty, remove debris. Check the counting optics (device eyes) and remove excessive dust or debris. Check the associated cable (s) and connections. Check the dispensing mechanism for debris - bent coin, coin bag string, stuck bill…
9	A FATAL **MEMORY** ERROR WAS DETECTED – Warning: the memory device that stores all critical setup information (dispense amounts, security settings…) is failing. DO NOT reset the associated device or place it back into operation!!! Replace the device logic board or send it in for repair with a note stating the following – "*The EE memory has failed and will need to be replaced*".
10	**POWER** FAULT DETECTED – Power was lost during a dispense. Check for intermittent connections or a faulty power line condition, i.e. loose plug, corroded connections, or too much load on one circuit. Warning: Power faults can result in short pays.
11	AN **UNKNOWN** OR UNDOCUMENTED ERROR WAS DETECTED – Contact a service center for an updated error code list, and/or reset the machine and check for proper performance before placing back into service.
12	**ILLOGICAL** – An illogical setup was detected. Examples – All bill acceptance is turned off, the dispenser type is invalid, the dispenser was told to dispense more than 200 "things".
13	**DATA** BAD ERROR – The machine has lost a portion of temporary memory. This error is not fatal and the machine will remain on-line. If a vend was in progress when the error was detected, the vend amount and associated count were cleared. This error is typically caused by excessive power surges. Install a surge filter on the power line to the machine.

14	**OVERPAY** LOGIC ERR – The device calculated it was told to dispense to many items. Check Dispense limit settings for the affected device. Check the Program settings.
15-30	**TRACKING CODES** – These codes are intended for use by SCM troubleshooting personnel. If code persists, contact the nearest SCM service center.
31	DISPENSER **OUTPUT** BLOCKED **–** The dispenser (coin, bill, ticket) sensor is blocked. Check the dispenser counting sensor and associated connections.
32	DISPENSER IS **EMPTY –** The dispenser (coin, bill, ticket) is empty. If dispenser is not empty, check the sold out sensor connections.
33	DISPENSER IS **JAMMED** – The dispenser (coin, bill, ticket) is jammed. Check the dispense path.
34	DISPENSER HAS **OVERPAID –** The dispenser (coin, bill, ticket) has issued an extra item. Check for debris mixed in with the coins or bills. Debris can be counted as an extra "item". If the error is from a ticket dispenser, check the tickets for tears in the area around the ticket notch. Extra notches (tears) can be counted as a ticket.
35	BILL DISPENSER **COMMUNICATION** ERROR – The bill dispenser is not talking. Check the communication (data) cable connections. Make sure the dispenser has power to it as well.
36	Not Used – Contact factory if error persists after resetting.
37	Not Used – Contact factory if error persists after resetting.
38	Not Used – Contact factory if error persists after resetting.
39	BILL DISPENSER CARTRIDGE IN **WRONG POSITION** – One of the bill cartridges in a multi-note dispenser is in the wrong position. Check position of all bill cartridges.

15.6.1.2 Resetting Dispenser Error Conditions

You can either reset a dispenser error condition by pressing the red reset button on the dispenser board or you can press the Machine reset button on the main control module.
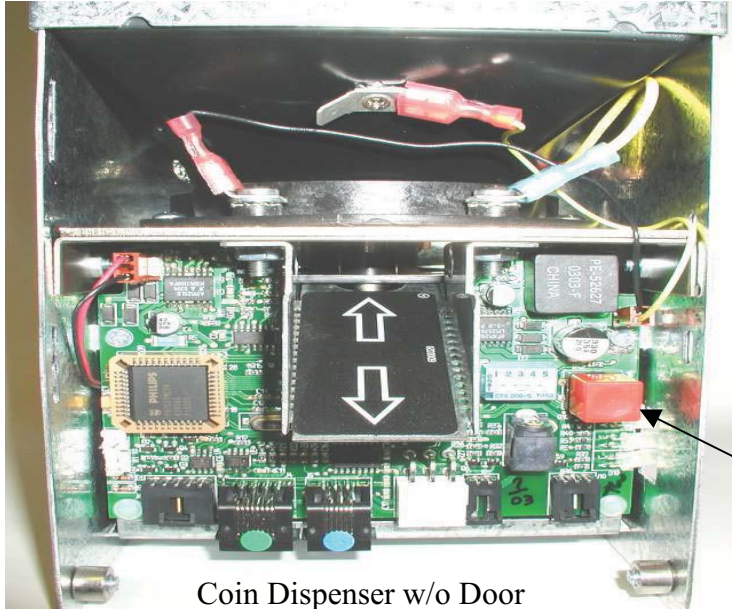
Reset Button

Each dispenser is equipped with a *push button* that can be used to reset the dispenser from an error condition. It is only necessary to reset the coin dispenser that is displaying the error flash code. Allow at least 45 seconds after releasing the button, for the entire reset process to be completed. The flash code should change back to the steady flashing pattern if the error was successfully reset.

RESET BUTTON

Coin Dispenser w/o Door

15.7 Coin Acceptor Troubleshooting

The coin acceptor used in the Guardian XP is the IDX-X10 coin acceptor. This coin acceptor includes a troubleshooting LED indicator to aid in programming and troubleshooting this device. The status for each LED color and condition is shown below.

- Steady Green – Normal.
- Steady Red - Program switch is in a position other than 0 (normal run position)
- Flashing Yellow - Coin acceptor is being disabled by the controller. Machine is OOS.
- No Light – No power to the device or a defective board. Check cable for connection and continuity.
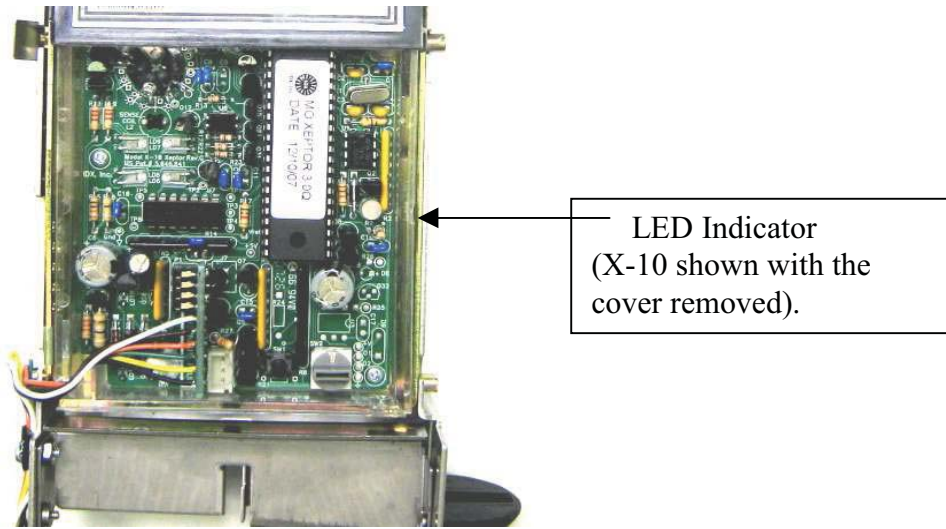
LED Indicator
(X-10 shown with the cover removed).

See the section of this manual titled "Setting Up Tokens" for more information regarding the coin acceptor and for information that explains how to "train" the acceptor to identify quarters, dollar coins and tokens. You can also visit the IDX web site at www.idxinc.com for more information on programming or troubleshooting this device.

15.8 Printer Troubleshooting

The optional Hengstler X-56 printer includes a Red and Green LED to indicate the status of the printer. The LED conditions will indicate normal operation as well as the "out of paper" and "printer failure" conditions.

For a paper, or cutter error, press the black button in to remove any debris. Pull the black button out to reload the paper. See the section titled "Loading Paper in the Printer" in the Quick Start Guide in the beginning of this manual for more information.

If both LED's are off, check the printer cable at both ends for a proper connection. Note: The printer cable plugs into the connector marked with a blue colored identifier at the main control board.

If the printer is not in an error mode but will not print receipts or reports, check the printer setting menu for proper programming.

15.8.1 Printer Fault Conditions

Green LED	Red LED	Fault Condition
Slow Blink-----1 second on, 1 second off	Off	Normal Operation
Medium Blink-1/10 second on, 1/10 second off	Off	Out of Paper
Flicker----------Very fast twinkle Error	On – Cutter Error	Paper Error, Cutter

Green
LED

Red
LED

Paper
Release
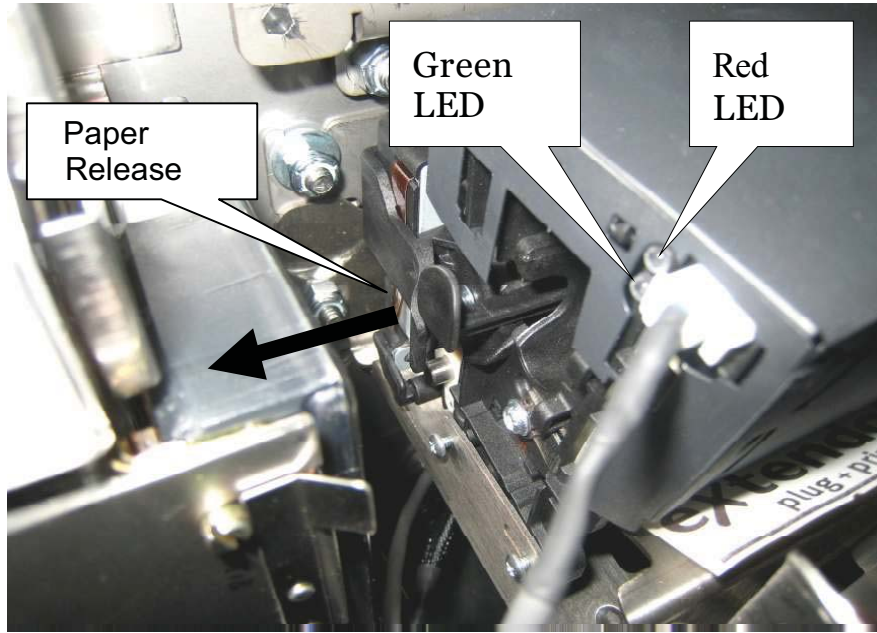
16.0 PLC

The PLC is the interface that connects the Guardian XP to the car wash equipment. This device has eight inputs and six outputs, each having an LED indicator to show the status of that port. This device also has a LEDs that display the communication status between the PLC and the main control board in the Guardian XP. A normal communication status would be when the PWR and RUN are solid green and the bars labeled CPU, TX1, and RX1(05) or TX2 and RX2 (CLICK) are flashing green.

The PLC indicator lights are very helpful in troubleshooting the system if a wash has failed to load or for other errors that can occur with the loss of communication between the Guardian XP and the Car Wash Controller. Following is a brief description of the use for each LED on PLC used in the Guardian XP application.

16.1 Direct Logic 05 PLC Indicator Lights

XO =Wash Bay Inhibit, X1 = Proximity Sensor, X2 = Bay Fault, X3-X7 =Future expansion
YO – Y3 =Wash Selection Outputs, Y4 =not used, Y5= Bay Busy

Port / LED
XO = OFF   Wash bay empty.
XO = ON   Wash in use.

X1 = ON   Proximity sensor blocked.
X1 = OFF   Proximity sensor unblocked.

X2 = ON   Car Wash sending a fault which will shut down the Guardian XP.
X2 = OFF   Car Wash not in fault.

Y0 = ON   Wash one has been selected. On time will be set by relay on time in wash settings menu.
Y1 = ON   Wash two has been selected. On time will be set by relay on time in wash settings menu.
Y2= ON   Wash three has been selected. On time will be set by relay on time in wash settings menu.
Y3= ON   Wash four has been selected. On time will be set by relay on time in wash settings menu.

Y5 = ON   Wash bay busy or GXP waiting for end of cycle (inhibit signal).
Y5= OFF   Bay empty or GXP has received end of cycle signal.

16.2 CLICK Controller Indicator Lights

X1 =Wash Bay Inhibit, X2 = Proximity Sensor, X3 = Bay Fault, X4-X8 =Future expansion
Y1 – Y4 =Wash Selection Outputs, Y5 =not used, Y6= Bay Busy

Port / LED
X1 = OFF   Wash bay empty.
X1 = ON   Wash in use.

X2 = ON   Proximity sensor blocked.
X2 = OFF   Proximity sensor unblocked.

X3 = ON   Car Wash sending a fault which will shut down the Guardian XP.
X3 = OFF   Car Wash not in fault.

X4 = ON   Gate closed signal return.
X4 = OFF   Gate normal.

Y1 = ON   Wash one has been selected. On time will be set by relay on time in wash settings menu.
Y2 = ON   Wash two has been selected. On time will be set by relay on time in wash settings menu.
Y3= ON   Wash three has been selected. On time will be set by relay on time in wash settings menu.
Y4= ON   Wash four has been selected. On time will be set by relay on time in wash settings menu.

Y5 = ON   Gate Open signal. On time will be set by gate rly on
Y5= OFF   time in wash settings menu.

Y6 = ON   Wash bay busy or GXP waiting for end of cycle (inhibit signal).
Y6= OFF   Bay empty or GXP has received end of cycle signal.

17.0   FREQUENTLY ASKED QUESTIONS

An owner can typically resolve many problems after he/she has been familiarized with our machine. The following are a few examples of questions and answers you may have concerning our equipment.

What kind of car wash discounts (promotions) can I run with the Guardian XP?
> The Guardian can be programmed for a time discount (early bird), or multiple coupons, tokens, or code based discounts. See the promotion section of the Guardian Owners Manual for more information.

My bill acceptor is rejecting too many bills.
A dirty sensor is one of the main reasons for bill rejections.   For MEI acceptors, refer to the label located on the back of the bill magazine for cleaning instructions.   Also, check the bill acceptor manual for error code and troubleshooting information.

My coin acceptor stopped accepting coins.
- The X-10 coin acceptor is design with LED status indicators to help in troubleshooting. No LED's lit might indicate the cable has come unplugged. Flashing RED/GREEN would indicate a critical sensor malfunction. A flashing Yellow would indicate the Guardian's controller has disabled the acceptor. You can visit the IDX web site at www.idxinc.com for more information.
- If the green status LED is on, reprogram the coin acceptor following the steps in section 8.1.5. titled setting up tokens.

My machine no longer approves credit card transactions.
- Contact your card processor and verify your account is in good standing.
- For high speed processing, use the configuration menu to verify the Guardian has received a valid IP address from your high-speed network.   The IP address will be displayed after the IPTran information.   If the IP address is all zeros, reset your high-speed modem and router.
- Clean the card reader with a mag stripe cleaning card or similar method.

My machine display's "Use Exact Amount – No Change Returned".
This message indicates the coin hopper is sold out or in fault. Fill the coin hopper if empty or check for a flash code error on the coin hopper control board. Refer to the Flash Code Troubleshooting Chart in this manual for more information.

My machine displays "This Machine is Out of Service".
Enter the main menu mode by pressing and holding both the test and reset buttons for at least 3 seconds, then releasing. The last error that occurred will now be displayed. Refer to the "Machine Troubleshooting Chart" section of this manual for more information.

The Guardian will not "load" a wash.
The Guardian uses the Direct Logic 05 PLC to interface with the car wash equipment controller.
- Verify the PLC is powered up and communicating to the Guardian XP main control board by viewing the settings in the Configuration Report.   You should see the software version of the PLC displayed (v. 1.0xx) when the "PLC Controller" selection is displayed.

- Refer to the installation guide to verify control wire connections from the Guardian XP PLC to the Car Wash equipment controller. Look for broken wires.
- Verify the PLC relay outputs Y0, Y1, Y2, or Y3 light when the corresponding selection is made after the correct dollar amount as been deposited.
- Verify the PLC toggle switch located next to the communication cable connector is set to RUN.
- Check the programming in the Wash Settings for the correct wash values (in dollars) for each of the four selections.

The Guardian will not work with my WashGear card system.
- Use the configuration menu to verify the Guardian can view the WashGear software version. IF not, check the Ethernet cable from the WashGear system to the Guardian control board for proper termination on both ends.
- Verify WashGear is selected as the card system type in the Credit Settings menu.
- Verify that a correct location ID as been programmed in the Other Settings menu.
- Verify with WashGear that the software running on the WashGear system is a version compatible with the Guardian XP.

18.0   MAINTENANCE & REPAIR

All modules have been packaged in a manner that will allow the easiest possible removal and require the least number of tools possible. The following tools are recommended:

- 7/16, 3/8 and 11/32 sockets or nut drivers; used for ¼-20, #10-32 and #8-32 nuts.

- Socket extension; used for long reach in deep cabinets.

- Flat head, #2 Phillips and #0 Phillips screw drivers; used for removing module covers.

- Needle nose pliers and wire cutters; used for removing small parts and cable ties.

18.1 Coin/Token Dispenser Preventative Maintenance

Preventative Maintenance Steps:

- Dump hopper once every six months and remove bent coins or tokens.
- Use canned air to remove dust and debris from hopper shell and dispenser area.
- Use a clean Q-tip and wipe off the coin interrupters located on either side of the coin chute openings.
- Inspect the coin funnel for cracks or gaps where coins could wedge, creating coin jams.
- Check that all cable connections are secure.
- Check that the yellow status light is flashing steady and not displaying a "flash code".
- Press the hopper reset button to reset any errors that may have occurred while servicing the dispenser.

18.2 Coin/Token Dispenser Repair
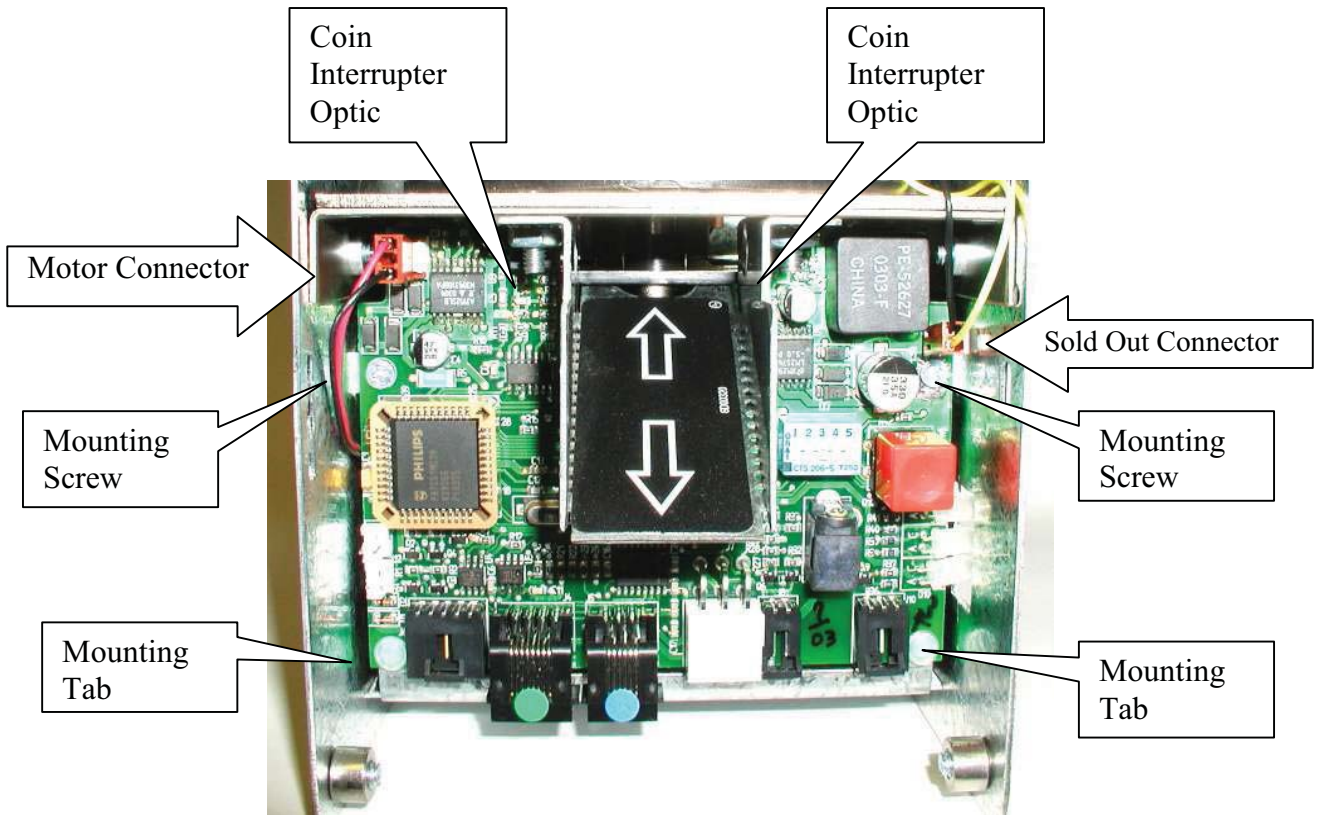
Important:

If the entire coin dispenser is replaced AND it is being replaced by one that was not the same value, it will be necessary to check the Wash Settings in the Main Menu mode. The machine will detect the new value and require that you check the settings before the machine can be placed into service. This is a safety measure to ensure you have had a chance to double check your Wash Vend settings.

- Always check the value of the coin dispenser to ensure it is the correct value for the coin you are loading it with. For more information see the section of this manual that pertains to setting the coin dispenser (hopper) value.
- Be careful to avoid pinching the motor connection wires (see picture above) between the coin dispenser control board and the coin dispenser frame.

To remove the coin dispenser with power off, disconnect all cables connections. If the dispenser will not be replaced immediately and the dispenser is the one on the left side of the cabinet it will be necessary to move the remaining dispenser (if present) into the left dispenser position. This is necessary because the left dispenser is the one the bill acceptor is plugged into.

18.2.1 Coin/Token Dispenser Control Board Replacement

The coin dispenser control board can be easily replaced. First, turn the power off to the machine. Next unplug the cables connected to the dispenser control board. Next remove the two screws in the upper two corners of the board as shown in the photo below. Finally, use a small straight edged screwdriver to "pop" the board loose from the two plastic push pins in the lower two corners of the board.
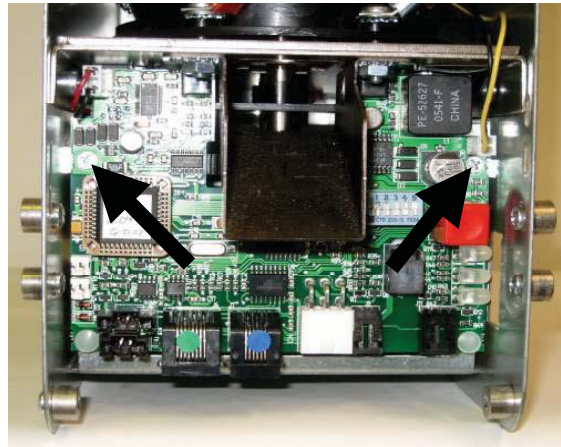
18.2.2 Coin Dispenser Sold-Out Configurations

Factory default settings: $20 sold-out level

The sold-out level (level of coins remaining in the coin dispenser) for the dispenser should be set to prevent a short pay condition that can occur when the coin reserve is near empty and a patron inserts a large denomination bill. In other words, you will want to leave enough coins in the dispenser to ensure that the last person to use the machine before it shuts off due to an empty condition, receives all of their change. Therefore the sold-out level setting should match or exceed the value of the largest bill denomination to be accepted, typically a $20 bill.

To determine how to set the optimum sold out level see the pictures below. To access the sold-out level settings, simply open the dispenser door. You may need to remove the shipping screw prior to opening the door.

$20 Sold-Out Level Setting	$5 Sold-Out Level Setting	Sold-Out "Bypassed"

Note: If the dispenser becomes empty in this configuration, a dispenser error will occur. The Reset Button on the dispemser must be pressed to clear the error after refilling the the dispenser

19.0   BILL ACCEPTORS

19.1 Bill Acceptor Preventative Maintenance

- Use canned air regularly to remove dust and debris from bill path.
- Use clean damp rag to wipe off optic sensors on the upper and lower track
- Review OEM manufacturer's information for additional tips.

19.2 Bill Acceptor Replacement

- With power off, remove the 4 mounting nuts that hold the bill acceptor mounting plate.
- Remove the bill acceptor mounting plate (4 screws) from the defective bill acceptor.
- Install the mounting plate onto the replacement bill acceptor.
- Install the bill acceptor / mounting plate in the machine using the 4 nuts.

19.3 MDB Bill Acceptors

The following is a list of MDB Bill Acceptors that will work in the Modular Machine Series:

BRAND	MFG'S. PT. NO.	SCM PT. NO.	DESCRIPTION
Coinco	Vantage Series	5V00352	Coinco, Vantage, USA,$100, 700
CashCode	Currenza Series	5V00351	CashCode, Currenza, CA$100, 500
MEI	AE2602 Series	5V00219	MEI,AE2602, USA, $20, 500
MEI	AE2812 Series	5V00221-M	MEI, AE 2812, USA, $100, 500

See the bill acceptor manual for more information regarding Multi-drop Bus operation and configuration.

20.0   PART ORDERING INFORMATION

To obtain service on a component or module, please follow these instructions.

1. Locate the fault to a specific component or module. See the troubleshooting section of this manual for assistance.

2. Call your nearest Standard Change-Makers service center. You will need to give the service representative the following.

   MODEL NUMBER OF YOUR MACHINE
   SERIAL NUMBER OF YOUR MACHINE

3. If you cannot furnish these numbers it will be extremely difficult for the service department to help you. The serial number and model number are located on a label inside your machine. Service center phone numbers are given on the last page of this manual.

4. Always remove power from your machine prior to removal of a component.

5. Remove the faulty component from the changer cabinet.

6. If the component is to be returned to the factory or service center, pack the component in the original factory packaging if possible. If the original packaging is not available, use a suitable substitute. Care should be taken to prevent damage to the components from electrostatic discharge and mechanical shipping damage.

NOTE: Please avoid the use of Styrofoam "peanuts" when packing. If peanuts are used, the component should be encased in a plastic bag to prevent clogging the mechanism.

20.1 Parts List

Guardian XP Replacement Parts List

Part Number	Description
1E00144	BUZZER, CONTINUOUS
4K00884-FI	PROXIMITY SENSOR KIT, PHOTOELECTRIC
4E00353	TERMINAL BLOCK, PROXIMITY SENSOR
4E00352	TERMINAL BLOCK, MAIN INTERFACE
1K00115	RELAY, 24VDC
1K00116	RELAY, 24VAC
1K00117	RELAY, 110VAC
1S00105	SWITCH,POWER SUPPLY, LIGHTED
1S00219	SWITCH, INHIBIT, TOGGLE
1S00202	SWITCH, DOOR, PUSH BUTTON
4E00356	SWITCH, SELECTION, METAL LIGHTED
4E00357	SWITCH, CANCEL, METAL LIGHTED
3M00178	A.C. RECEPTACLE, DUAL OUTLET
5M00107	SURGE ARRESTOR
1E00146	RFI FILTER UNIT
5P00239	POWER SUPPLY UNIT, MAIN
1S00217	KEYPAD, EXTERNAL MOUNT
4A00292	PROGRAMMABLE LOGIC CONTROL UNIT
4E00345	EF2 CPU MODULE BOARD ASSY
4E00346	EF2 CPU MODULE BOARD ASSY, w/ETHERNET
2F03040	COVER, EF2 CPU MODULE BOARD
2F02988	COVER, PLC JUNCTION BOX
2F02978	COVER, POWER BOX
2F03411	COVER, INTERNAL WIRING HARNESS, DOOR
2F03385	COVER, SELECTION SWITCHES, INTERNAL
6D00685	WASH SELECTION PLACARD, CUSTOM
2F03043	WASH SELECTION PLACARD COVER FRAME
2F03282	WASH SELECTION PLACARD BACK PLATE
5L00107-2	LOCK PLUG SET, MEDECO, 2 LOCKS, 2 KEYS
3M00113	LOCK CYLINDER for MEDECO LOCK PLUG
3B00116	LOCK BOLT, 1/2-13 x 2 1/4" AHCS
2Y00102	LOCK BOLT ASSY. SPRING
3W00103	LOCK BOLT ASSY. WASHER
3N00104	LOCK BOLT ASSY. NUT
2W00100	LOCK BOLT WRENCH
4A00291	VOICE MODULE, GXP
5P00119	VOICE MODULE POWER SUPPLY, GXP
4A00299	COIN ACCEPTOR, IDX w/HOUSING
2F03001	COIN SLOT ESCUTCHEON PLATE
4M00848	COIN BOX
4M00901	COIN CUP ASSEMBLY
4M00840	COIN CUP CHUTE ASSEMBLY
4A00303	C.C. READER, 2 HEAD, FLUSH MNT
3M00380	C.C. READER, METAL BEZEL ONLY
2F03037	C.C. READER WEATHERSHIELD

	2F03436	C.C. READER INTERNAL COVER
	2F02984	C.C. INSTRUCTION MOUNTING PLATE
	5M00231	C.C. MODULE, IPTRAN for MERCURY PAYMENT
	5M00232	C.C. MODULE, IPTRAN for STERLING PAYMENT
	5M00229	C.C. MODULE, IPTRAN for ALL OTHERS (NO MERCURY & STERLING)
	5M00228	C.C. MODULE, DATATRAN for DIAL-UP
	5P00241	C.C. POWER SUPPLY UNIT
	3M00388	C.C. READER CLEANING CARD
	5M00238	PRINTER, HECON
	4M00949	PRINTER MOUNT ASSEMBLY, HECON
	8M00573	THERMAL PAPER ROLL (2 1/4" x 400')
	3M00407	WIRE HARNESS PROTECTIVE SLEEVE, .625 ID x 21"
	4C00391	CABLE, EF2 CPU TO HECON PRINTER
	4C00263	CABLE, MDB NOTE ACCEPTOR
	4C00360	CABLE, EF2 CPU TO BUZZER
	4C00355	CABLE, EF2 CPU TO KEYPAD
	4C00356	CABLE, EF2 CPU TO VOICE MODUE
	4C00366	CABLE, EF2 CPU TO SELCTION BUTTONS
	4C00377	CABLE, EF2 CPU TO IDX COIN ACCEPTOR
	4C00384	CABLE, POWER BUS, 10" HOPPER TO HOPPER
	4C00385	CABLE, CONTROL BUS, 10" HOPPER TO HOPPER
	4C00386	CABLE, EF2 CPU TO HOPPER
	4C00388	CABLE, EF2 CPU TO C.C. READER
	4E00351	USER DISPLAY MODULE, 2X20 CHARACTERS
	6L00132	USER DISPLAY WINDOW, GXP
	4E00347	SPEAKER ASSEMBLY
	4M00947	HEATER CONTROL ASSEMBLY
	4M00946	HEATER ELEMENT ASSEMBLY
	5A00216	AUTO-DIALER MODULE
	5M00251	AUTO-DIALER CABLE
	4E00322	HOPPER P.C. BOARD ASSEMBLY
	4M00865	HOPPER DISPENSER PLATFORM
	5H00276	HOPPER DISPENSER, DOLLAR/QUARTER
	5H00281	HOPPER DISPENSER, CDN QUARTER
	5H00277	HOPPER DISPENSER, DIME
	5H00283	HOPPER DISPENSER, NICKEL
	5H00XXX	HOPPER DISPENSER, TOKEN (Specify token size when ordering)
	6D00684	LEXAN DECAL, MACHINE FRONT
	4K00925-FI	BILL ACCEPTOR MOUNT, MARS AE2602
	4K00927-FI	BILL ACCEPTOR MOUNT, MARS AE2812
	3M00408	BILL ACCEPTOR WEATHER GASKET, MARS AE2602
	3M00409	BILL ACCEPTOR WEATHER GASKET, MARS AE2812
	5V00219	BILL ACCEPTOR, MARS AE2602, USA, $1-$20
	5V00221	BILL ACCEPTOR, MARS AE2812, USA, $1-$100
	5V00352	BILL ACCEPTOR, COINCO VANTAGE, USA $1-100
	5V00351	BILL ACCEPTOR, CASHCODE, CURRENZA, CAN, $5-20
	5S00107	BILL STACKER, MARS, AE2602,1000 CAPACITY
	5S00354	BILL STACKER, MARS, AE2602, 700 CAPACITY
	4K00815-FI	INSTALLATION RETROFIT FRAME, ACW 3-4-5
	4K00929-FI	INSTALLATION RETROFIT FRAME, ACW 2
	4K00909-FI	INSTALLATION RETROFIT FRAME, D&S CABINET

		STAINLESS STEEL HOOD ASSEMBLIES	
	2F03416	FRONT PANEL, FOR DECAL APPLIED HOOD	
	6D00700	LEXAN DECAL, "PAY HERE"	
	5L00135	LOCK, FRONT PANEL, ALL HOOD ASSEMBLIES	
	2F03412	FRONT PANEL, FOR BACK LIGHTED & SCROLLING HOOD	
	6L00142	LENS, "PAY HERE", BACK LIGHTED HOOD	
	4E00358	LED LIGHT MODULE, BACK LIGHTED HOOD	
	5P00240	POWER SUPPLY UNIT, BACK LIT HOOD, 12 VDC	
	2P00192	LENS, CLEAR, SCROLLING SIGN HOOD	
	2P00191	LENS, RED, SCROLLING SIGN HOOD	
	4A00301	SCROLLING LED DISPLAY UNIT ASSEMBLY	
	1T00105	TRANSFORMER, SCROLLING DISPLAY	
	4C00375	CABLE, CPU TO SCROLLING DISPLAY	
	4C00395	CABLE, TRANSFORMER FOR SCROLLING DISPLAY	

Appendix A.   Custom Entry Template

The user display in the Guardian XP is an alpha/numeric 2 line, 20 character per line display. The template below can be used by the machine owner to map out the possible messages you would like to display. Custom displays can be used for the welcome prompt, up sell prompt, exit prompt, off line prompt, out of service prompt, as well as custom wash names. Below is an example of a custom welcome prompt "WELCOME TO BIG J CAR WASH.

WELCOME NAME TEMPLATE

Welcome Message 1 Example

| W1T | | | | | | W | E | L | C | O | M | E | | T | O | | | | | |
| W1B | | | | B | I | G | | J | | C | A | R | | W | A | S | H | | | |

Welcome Message 1 Top and Bottom

| W1T | | | | | | | | | | | | | | | | | | | | |
| W1B | | | | | | | | | | | | | | | | | | | | |

Welcome Message 2 Top and Bottom

| W2T | | | | | | | | | | | | | | | | | | | | |
| W2B | | | | | | | | | | | | | | | | | | | | |

Welcome Message 3 Top and Bottom

| W3T | | | | | | | | | | | | | | | | | | | | |
| W3B | | | | | | | | | | | | | | | | | | | | |

Welcome Message 4 Top and Bottom

| W4T | | | | | | | | | | | | | | | | | | | | |
| W4B | | | | | | | | | | | | | | | | | | | | |

Appendix B. Setting Dispenser Type

(The Factory Default Setting for Dispenser Type is "COIN").

To make a change to the Dispenser Type feature, follow the step by step procedure outlined below.

Note: The five-position switch and red selection button are located on the dispenser control board. For machines with multiple dispensers, these settings must be set on each dispenser control board for the feature to be activated.

IMPORTANT: Please note the original switch settings before starting this procedure. You will need to return the switches to this original setting to assure proper operation after making any changes. As a convenience, you can enter these original settings in the diagram to the right by simply marking an "X" for UP (ON) or DOWN (OFF) on each switch.

1 2 3 4 5
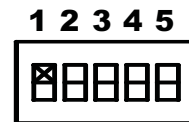
1. Activate the Dispenser Type programming mode by setting:
   Switch 1–ON; Switch 2-OFF; Switch 3-OFF; Switch 4-ON; Switch 5-ON

2. Press the red selection button one time.

3. Advance to the Dispenser Type selection step by setting;
   Switch 1-ON; Switch 2-OFF; Switch 3-OFF; Switch 4 –OFF; Switch 5-OFF

4. Press the red selection button ten times.

5. Now set switches to desired setting Choice numbers 1 through 5 as per the cart below. Once you've made your selection, press the red selection button one time.
   Example: Set switches to match Choice 2 if you want the Dispenser Type set to "TOKEN".

6. End the programming sequence by resetting the switch to their <u>original</u> settings, and then press the red selection button one time to put the machine back into service.

PARAMETER TABLE – **DISPENSER TYPE**

CHOICE	SETTING	SWITCH POSITIONS			
		SW2	SW3	SW4	SW5
1	COIN	OFF	OFF	OFF	ON
2	TOKEN	OFF	OFF	ON	OFF
3	BILL	OFF	OFF	ON	ON
4	CARD	OFF	ON	OFF	OFF
5	TICKET	OFF	ON	OFF	ON

Appendix C.   Custom Dispenser Value
(The Factory Default Setting for Dispenser Value is " $00.00").

To make a change to the Dispenser Value, follow the step by step procedure outlined below.

Note: The five-position switch and red selection button are located on the dispenser control board. For machines with multiple dispensers, these settings must be set on each dispenser control board for the feature to be activated.

1. Activate the Dispenser Value programming mode by setting:
    Switch 1–ON; Switch 2-OFF; Switch 3-ON; Switch 4-OFF; Switch 5-ON

2. Press the red selection button one time. This advances you to the "Tens" digit of the dollar amount.

3. Now set switches to desired setting from the Choice numbers 1 through 10 below.

4. Press the red selection button one time. This advances you to the "Ones" digit of the dollar amount.

5. Now set switches to desired setting from the Choice numbers 1 through 10 below.

6. Press the red selection button one time. This advances you to the "Tens" digit of the cents amount.

7. Now set switches to desired setting from the Choice numbers 1 through 10 below.

8. Press the red selection button one time. This advances you to the "Ones" digit of the cents amount. ("Ones" digit can only be set to either 0 or 5.)

9. Now set switches to desired setting from the Choice numbers 1 through 10 below.

***Multi-Denomination Bill Dispensers** – repeat steps 2 through 9 for each additional cassette even if the cassette has the same denomination bill as another. The first cassette programmed will be the top one, the second is the next one down (if looking at the dispenser) and so on. When the last cassette is programmed proceed to the next step. If your machine was purchased without the optional EF Module, you must use the "Forced Dispense Feature" (page J) to set the bill dispensed settings or the Make Best Change feature will determine the bills dispensed automatically.*
Example – In a BX machine, it would be necessary to set a force dispense to five (5) if you want (5) one dollar bills dispensed for (1) five dollar bill accepted. The force dispense amount will be dispensed from the top cassette.

10. Press the red selection button one time.

11. End the programming sequence by resetting the switches to the OFF (down) position, and then press the red selection button one time to put the machine back into service.

DISPENSER VALUE CHOICES					
CHOICE	SETTING	SWITCH POSITIONS			
		SW2	SW3	SW4	SW5
1	1	DOWN	DOWN	DOWN	UP
2	2	DOWN	DOWN	UP	DOWN
3	3	DOWN	DOWN	UP	UP
4	4	DOWN	UP	DOWN	DOWN
5	5	DOWN	UP	DOWN	UP
6	6	DOWN	UP	UP	DOWN
7	7	DOWN	UP	UP	UP
8	8	UP	DOWN	DOWN	DOWN
9	9	UP	DOWN	DOWN	UP
10	0	UP	DOWN	UP	DOWN

Appendix D.   Restrictions On Port Usage

When using the Xport ethernet device and setting a port it is advised not to use ports 1 through 1024, 9999, 14000 through 14009, 30704 and 30718. These ports are either commonly used or can be used by the Xport.

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Record these numbers here for use when ordering parts.

Serial #_____

Model #_____

Standard Change-Makers, Inc.

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